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ABSTRACT

Three types of research summaries comprise this loose-leaf compendium: "topical synthesis," "closeups," and "snapshots." The single topical synthesis is entitled "Fostering Intercultural Harmony in Schools" (Kathleen Cotton). Closeups consist of brief definitions and essential research findings on the following topics: "Developing Employability Skills" (Kathleen Cotton) and "Integrated Curriculum" (Kathy Lake). Four snapshots describe effective practices currently in place at various school districts throughout the country: "Implementing a Nongraded Elementary Program" (Kathleen Cotton); "School Improvement through Teacher Decision Making" (Al Fitzpatrick); "Restructuring at the Secondary Level: Grouping, Instruction, and Assessment" (Nancey Olson); and "Rejuvenating a Multiethnic Urban School" (Angela Wilson and Kathleen Cotton). Annotated bibliographies are appended to the topical syntheses and closeups. (MLF)

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SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Topical Synthesis #7

Fostering Intercultural Harmony in Schools: Research Findings

Kathleen Cotton

One cannot deny that thousands of schools across the United States and abroad have multi-ethnic student bodies... and that intergroup relations are frequently restricted and tense.
—Y. Rich 1987, p. 498

If we are to attain real peace in this world, we will have to begin with the children.
—M. Gandhi (quoted in Swadener 1988, p. 5)

Introduction

INTERCULTURAL TENSIONS IN SCHOOLS

In many school settings across the U. S., interracial, interethnic, and other intercultural tensions are major impediments to improving student achievement, social behavior, and attitudes. "These tensions," write Klugman and Greenberg (1991), "manifest themselves among students and between students and staff members."

During a recent 11-month period, the Community Relations Service of the U.S. Department of Justice, which records and responds to reports of intercultural strife in schools, logged "conflict [ranging] from incidents of name calling and distribution of hate literature on campus to gang fights involving weapons and fatal attacks" (p. 96).

Writing about intercultural relations in schools, Parrenas and Parrenas note that:

> ...the problem of poor race relations among students is progressive: each school year students choose fewer friends outside their own ethnic or cultural group....by the end of elementary school they begin to segregate themselves along race lines. Racial divisions and tensions increase through middle school, culminating by high school in students isolated from those in other racial groups. Whether or not there is the appearance of racial gangs, there is racial tension (1990, pp. 7-8).

Easing strained intercultural relations and fostering more positive interaction among diverse groups in educational settings have been the focus of considerable work on the part of many legislators, educators and citizens. Large-scale efforts ranging from court-mandated school desegregation to implementation of multicultural education programs and increased attention to cultural learning styles have been undertaken to address intercultural

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inequities and tensions. While these and other actions have met with some success, intergroup strife continues to be a major concern of educators, students, parents, and the public.

CHANGING U.S. DEMOGRAPHICS

Widespread concern about intercultural relations is also growing due to the profound changes taking place in the composition of the U.S. population—changes which are causing the U.S. to become a more culturally diverse nation than ever before.

The following are highlights from the work of a few of the researchers and other education writers who have analyzed and commented on these demographic shifts:

- In 1980, five out of six Americans were white; one out of six was black, Hispanic, or Asian. By 2000, the proportion of whites will have dropped to two out of three, while the minority proportion will have doubled to a third.
- The above distinctions mask significant internal diversity. Hispanics, Asians and immigrant whites come from many different countries and cultures.
- The white population is both older and less prolific than many other groups.
- Of the ten countries sending the most new immigrants to the U.S., five are Caribbean, three are Asian, and one is South American. The only European source of immigrants in the top 10 is the former Soviet Union.
- By the year 2000, Hispanics will comprise the largest single segment of school-aged children in California and throughout the Southwest. By the year 2020, California's whites will account for only 40 percent of the state's population.
- "Minorities" constitute the majority of school enrollments in 23 of the nation's largest cities.
- By the year 2000 more than 50 major U.S. cities will have a "majority minority" population.
- The school population with limited English proficiency (LEP) has increased by more than 250 percent in the past decade. Increases in the number of LEP students are occurring even in school districts with declining enrollments. In New York City, 35 percent of public school students speak a language other than English at home.

(American Jewish Committee 1989; Banks 1988; Burstein 1989; Gay 1988; Grossman 1991; Grundy 1992; Parrenas and Parrenas 1990)

At the same time that the school-aged population is becoming more multicultural, the teaching profession is becoming more monocultural. In 1985, approximately 88 percent of the U.S. teaching force was white; by the year 2000 this is expected to increase to 95 percent (Burstein 1989; Pine and Hilliard 1990; Sleeter 1990). This imbalance, too, can be a source of intercultural tension, since the values and teaching/learning approaches of the predominantly white staff can often work to the academic and social advantage of white students and to the disadvantage of others (Pine and Hilliard 1990, p. 597).

THE FOCUS OF THE LITERATURE SYNTHESIS

The body of literature about cultural diversity in relation to education is enormous and addresses many different topics. It is important, therefore, to specify the intent and range of this synthesis. Its purpose is to identify schooling practices which well-designed research has shown to be related to changes in intercultural relations in educational settings. The approach taken involves (1) examining research on practices that educators have used to reduce negative intercultural attitudes and behaviors and/or to promote positive ones, (2) determining how well those approaches have worked, and (3) making recommendations based on findings.

Definition

As a prelude to analyzing the effects of activities aimed at improving intercultural relations, it is important to establish what is meant by "culture" and what kinds of groups count as "cultures" in the context of the literature. Ploumis-Devick expresses a view which is gaining widespread currency when she writes:

> Culture is basically a framework for behavior. It consists of human-made guidelines, written and unwritten, that serve to provide order to how groups of people relate to one another and to their world. Cultural diversity refers simply to the differences which exist among cultural groups (1992, p. 6).

This definition is helpful, because of its broad conception of culture. And, indeed, much of the recent research and other writing on intercultural relations and multicultural education has gone beyond issues of *race* and *ethnicity* (which tend to come to mind first when thinking of culture) to include other groups that have been targets of prejudice and discrimination. Researchers Sleeter and Grant write:

> Originally linked only to concerns about racism in schooling, [multicultural education] has expanded to address sexism, classism, and handicapism (1987, p. 421).

In a similar vein, Merrick notes that:

> The multicultural education of the 1970s included programs on women and a variety of ethnic groups. In the 1980s, multicultural/multiethnic education encompasses other Americans whose life-styles differ from that of the status quo (1988, p. 6).

Arguing for an even broader view of multicultural education, University of Washington Multicultural Education Center Director, James Banks, writes:

> A lot of people are on the margins of society because of their race, class, gender, or sexual orientation. Multicultural education is about bringing them to the center, making one nation from many people. That is consistent with the nation's motto, "E Pluribus Unum" (quoted in Lockwood 1992, p. 7).

Also encouraging us to expand our understanding of intercultural strife and the need to address it, Byrnes writes:

> ...the terms "prejudice" and "discrimination" are most often associated with victims of racism, ethnocentrism, sexism, and religious bigotry....Such a narrow view of these social phenomena, however, may prevent our acknowledging and addressing other less familiar forms of prejudice and discrimination that occur in the social worlds of children and adults. Socioeconomic class bias, bias against the disabled, aesthetic discrimination against those who do not meet cultural expectations of attractiveness, and biases against certain life-styles all involve prejudices and discriminatory practices that have been observed among elementary school children (1988, p. 267).

The next section of this report, which is devoted to an overview of the research literature on enhancing intergroup relations, identifies the broad array of "cultures" with which this literature is concerned—as both subjects and objects of intercultural strife and intercultural goodwill.

If culture is describable as a behavioral framework, then cultural sensitivity and cultural literacy would require a more-than-superficial familiarity with an array of such frameworks. Reviewing research on classroom management for culturally diverse classrooms, Grossman (1991) writes:

> To be culturally sensitive is to be aware of the ways in which cultures differ and the effects of these differences....To be culturally literate is to have a detailed knowledge of the cultural characteristics of specific... groups. This knowledge is not merely about holidays, food, dances, music, and so forth. It includes values, behavioral norms, acceptable and effective reinforcements, patterns of interpersonal relationships, and so on (pp. 161, 191).

The Research Literature on Approaches to Promoting Intercultural Harmony

Ninety-one documents were examined in preparation for this report. Fifty-five of these are research documents concerned with the impact of various schooling practices on the intercultural knowledge, attitudes, and/or behavior of teachers and students. Another 36 are related research or research-based documents—demographic studies, position papers, inquiries into the nature of prejudice, program descriptions, and discussions of differing cultural traits and learning styles.

The research literature on cultural diversity is itself very diverse. Of the 55 research reports on approaches to improve intercultural relations, 32 are studies or evaluations, 21 are reviews or syntheses, and 2 summarize both review and study efforts.

Subjects in 43 of the reports are students (1 preschool/kindergarten, 14 elementary, 7 secondary, 3 postsecondary or other adult, and 18 general elementary-secondary or unspecified student population). Preservice teachers are the subjects of 5 of the reports, and inservice teachers are the subjects in 4.

While 16 of the reports focusing on students do not specify the cultural groups to which their subjects belong (describing them only as "culturally diverse" or "culturally mixed"), the other 27 documents do identify the groups their subjects represent. Some of these designate subjects by general cultural membership, such white or Anglo (14 studies), black or African-American (12), Hispanic or Chicano or Latino (4), Asian (4), and Native American (2). Others identify their subjects by specific background nationality, including Mexican (3 studies), Puerto Rican (2), and Cuban, Ecuadorian, Nicaraguan, Haitian, Pakistani, Chinese, Vietnamese, Hmong, and Israeli (1 each). Some of this research also studied the differential effects of certain schooling practices on males versus females and disabled versus able-bodied subjects.

Looking at the research on preservice and inservice teachers, four of these studies indicated only that their subjects were culturally diverse, but groups specified in the other 5 studies included white or Anglo (5 studies), black or African-American (3), and Hispanic (2).

Another way of looking at the range of human diversity represented in these documents is to review the outcome areas with which the research is concerned. Though the studies and reviews are structured differently from one another, nearly all are concerned with subjects' *knowledge* and/or *attitudes* and/or *behavior* toward a people of a given race, ethnicity, religion, age, sex, sexual orientation, political orientation, socioeconomic class, achievement level, or ability-disability status. A typical research design involves exposing subjects to some kind of in-school treatment and studying the effects of that treatment on the subjects' outlook toward persons whose race, ethnicity, religion, and so on is different from their own.

Some investigations are concerned with impact on more general outcomes, for example, "cross-cultural relations," "intergroup tolerance," or attitudes toward "minority groups," "cultural diversity," "alternative lifestyles," and "human differences." Still others focus on changes produced by these in-school treatments in the incidence of behaviors emanating from intergroup tensions—behaviors such as vandalism, graffiti, distribution of "hate literature," fights, detentions, suspensions and expulsions.

What kinds of "in-school treatments" does one encounter? The research base is concerned with the effects of many kinds of schoolwide and classroom-level managerial and instructional behaviors. Researchers and reviewers have investigated the ways that knowledge, attitudes, and behavior are affected by: school desegregation, other forms of increased intergroup contact, cooperative learning activities, multicultural education, cultural immersion, self-esteem-building activities, prejudice-reduction activities (e.g., role-taking, use of dramatic presentations, counter-stereotyping, etc.), activities to build critical thinking skills, parent involvement, school staff modeling of harmonious intercultural contact, and academic tracking.

In the studies of preservice or inservice teachers, researchers usually focus on the effects of multicultural education classes or trainings on the knowledge, attitudes and teaching behavior of subjects, particularly in relation to cultural minority groups.

Research Findings I: Students

MULTICULTURAL EDUCATION

Attempting to identify a research link between multicultural education and increased intercultural harmony is a maddening enterprise, largely because the term encompasses such a broad array of activities. In two large-scale literature reviews conducted by Grant, Sleeter, and Anderson (1986) and Sleeter and Grant (1987), the researchers identified dozens of programs and activities called "multicultural education" and clustered these into several major categories, including

1. **Business as Usual with Minimal Compliance to Civil Rights Laws**. Such activities typically involve mixing students in school "on the basis of race, sex, and handicap," but keeping to very traditional curriculum and instruction. This approach is characterized by a belief that cultural assimilation is desirable.

2. **Teaching the Exceptionally or Culturally Different**. This approach is also posited on the conviction that cultural assimilation is desirable and that it will occur more efficiently if nonmainstream students are offered instructional strategies and materials that accommodate language and cultural differences—until the students can succeed without these "bridges."

3. **Human Relations**. Based on the assumptions that tolerance of differences is desirable and people who differ should treat each other humanely, this approach typically involves adding to the standard curriculum and instruction some additional activities promoting cross-group interactions and opportunities for all to succeed.

4. **Single Group Studies**. Developers of these activities hold to the idea that cultural assimilation is undesirable and that knowledge and appreciation of different groups' histories, cultures, and contributions will foster such appreciation. Courses on specific groups are offered alongside the regular curriculum.

5. **Multicultural Education**. Though all of these approaches have been called "multicultural education," the authors argue that true multicultural education is aimed at reducing social stratification and assimilation by promoting knowledge and appreciation of America's cultural diversity. In keeping with this goal, curricula are rewritten to reflect ethnic, gender, social class, and handicap diversity, etc.; diverse learning styles are honored and accommodated; languages other than English have a place in instruction; and nontraditional staffing patterns are encouraged.

6. **Education that is Multicultural and Social Reconstructionist.** In addition to the above multicultural education provisions, educators prepare students to challenge social stratification directly through such means as having them study current social issues and teaching them political action skills.

Other researchers and writers who have made a specialty of providing and/or studying multicultural education offer similar views. Some examples:

- "Multicultural education rejects the 'melting pot' theory and advocates movement toward a culturally pluralistic society" (Merrick 1988, p. 5).

- "Multicultural education has been a reform movement aimed at changing the content and processes within schools. Originally linked only to concerns about racism in schooling, it has expanded to address sexism, classism, and handicapism" (Sleeter and Grant 1987, p. 421).

- "The goal of multicultural education...is 'education for freedom.' First, I mean that multicultural education should help students to develop the knowledge, attitudes, and skills to participate in a democratic and free society. Secondly, multicultural education promotes the freedom, abilities, and skills to cross ethnic and cultural boundaries to participate in other culture and groups" (Banks, quoted in Lockwood 1992, p. 5).

- "Multicultural education is a process through which individuals develop ways of perceiving, evaluating, and behaving within cultural systems different from their own (Gibson 1984, quoted in Ploumis-Devick 1992, p. 6).

- "Although the advocates of multicultural education do not all speak with one voice, several concerns are central to the idea of multiculturalism: (1) a more balanced version of history; (2) the personal development and interpersonal relations of students—especially with respect to their own ethnic/racial identity, self-esteem, and intergroup relations; (3) fair and effective approaches to individual differences in learning styles that are believed to have links to cultural influences; (4) multicultural representation in the entire school environment—staffing, policies, and procedures, and staff organization development; (5) equal opportunity to learn for all groups" (Gottfredson, Nettles, and McHugh 1992, p. 5).

Clearly, one of the goals of multicultural education is to promote improved intercultural relations. How effective multicultural programs have been in bringing about improvements is difficult to determine, however, partly because of the lack of specificity in the use of the term "multicultural education," but also because there is not a great deal of systematic research on the effects of entire programs.

One thing we do know is that programs—whether they are called "multicultural education" or something else—are unlikely to improve cross-group relations if their treatment of cultural diversity is too brief or too superficial. Programs designed to expand students' *knowledge* of other cultures through, for example, the presentation of facts and other information, generally have little or no effect on *attitudes* or *behavior*. Neither do "one-shot" or other brief activities, regardless of their content. (Byrnes and Kiger 1986-87; Garcia, Powell, and Sanchez 1990; Gimmestad and De Chiara 1982; Hart and Lumsden 1989; Merrick 1988; Pate 1981, 1988)

Pate writes:

> The cognitive, affective, and behavioral components of prejudice are not necessarily related....We might expect that the way people think, their attitudes, and their behavior would be closely related; research indicates that this is not always true (1981, p. 289).

So what kind of multicultural programming *is* effective in fostering the attitudes and behavior that characterize harmonious interaction? Such research as there is indicates that multicultural education is most beneficial:

- When all children are involved

- When it is in depth, long-term, and infused into the overall curriculum

- When children are introduced to multicultural activities as young as possible

- When teachers have the attitudes, training, materials, and support needed to deliver high-quality multicultural education activities.

(Campbell and Farrell 1985; Garcia, Powell, and Sanchez 1990; King 1983; Merrick 1988; Rich 1990; Ruiz 1982; and Swadener 1986, 1988)

In addition to these general findings about multicultural education, there is a rich body of research literature on specific managerial and instructional practices which enhance intercultural relations, e.g., cooperative learning, critical thinking development, and activities aimed at building student self-esteem. Since these practices are present in many programs designated as multicultural education, we can submit that programs which include these practices are likely to be successful in bringing about more harmonious intercultural relations. We can also speculate with confidence that programs lacking these elements will meet with less success. A discussion of practices follows.

CONTACT AMONG DIFFERENT CULTURAL GROUPS

In some settings, bringing students into task-related and social contact with those who are culturally different from themselves has influenced attitudes for the better and led to positive intergroup relations. In other settings, attitudes and interactions have remained unchanged or even worsened. What accounts for the difference?

In 1954, Gordon Allport published what has since become a well-known theory of interracial and interethnic contact. Drawing from research findings about intergroup contact and its outcomes, Allport concluded that contact can reduce prejudice and foster positive relationships between members of different cultural groups under certain conditions. These include:

- Equal status in the situation
- Opportunity to get to know one another as individuals
- Common interests and similar characteristics, such as age or occupation
- Social norms favorable to association between the two groups, especially standards set by leaders in the situation
- Circumstances favoring—or at least not antagonistic to—cooperation
- Opportunity to advance individual or group goals through cross-cultural interaction.

Subsequent researchers have validated Allport's findings, as well as identifying additional conditions under which intercultural contact among students is beneficial, including:

- When it is extracurricular and social as well as academic (Foster 1989; Rich 1990; Robinson 1979; Rogers, Miller, and Hennigan 1981)
- When it is frequent and sustained (Foster 1989; Schwarzwald, Fridel, and Hoffman 1985; Peck, Donaldson, and Pezzoli 1990).

As one might expect, researchers have also found that intergroup contact which takes place in the absence of all or most of these conditions generally does not lead to improved relationships and may even lead to a deterioration of cross-cultural attitudes and behavior. We know that neither school desegregation, in and of itself, nor smaller-scale projects involving only cultural mixing, produce true social integration (Parsons 1984; Roberts 1982; Walberg and Genova 1983). Instead, intercultural contact can be described as a necessary but not sufficient condition of genuine integration. In his analysis of teaching strategies that promote positive cross-cultural relations, Roberts writes:

> Integration does not just occur naturally as a result of merely placing students of different races or ethnic groups together in the same school setting....Integration, instead, is achieved by conscious effort, particularly of classroom teachers (1982, p. 3).

A circumstance in which deliberate increases in intergroup contact has been shown to cause more harm than good is when culturally mixed groups are assembled and given a task, only to experience failure. If the group task is poorly explained, too difficult for participants, or otherwise inappropriate in such a way that the group cannot successfully complete it, participants are likely to blame students who differ from themselves—in race, gender, ability, etc.—for the failure. When managed well, however, group learning activities can be extremely successful, as detailed in the next section.

COOPERATIVE LEARNING

The use of cooperative learning as a means to improving intercultural relationships is supported by more well-designed research than any other single schooling practice. Organizing learners into culturally heterogeneous teams, giving them tasks requiring group cooperation and interdependence, and structuring the activity so that the teams can experience success, comprise an extremely powerful means of enhancing intergroup relations. (Byrnes 1988; Conard 1988; DeVries, Edwards, and Slavin 1978; Foster 1989; Hart and Lumsden 1989; Johnson, Johnson, and Scott 1978; Moore 1988; Parrenas and Parrenas 1990; Pate 1981, 1988; Rogers, Miller, and Hennigan 1981; Slavin 1985, 1989, 1990; Slavin and Oickle 1981; Swadener 1988; Warring, et al. 1985)

This finding holds true for learners of all ages, including adults, and for virtually every kind of difference—race, ethnicity, handicap, sex, academic ability, and so on. Following participation in cooperative learning activities, learners typically show increases, not only in the number of cross-cultural contacts and friendships they identify, but also in the depth and importance of those friendships. Marked decreases in intergroup tension are noted as well, both by observers and by cooperative learning participants themselves. "The essence of the idea," writes Pate, "is that when we share common problems, tasks, goals, and success with people of another ethnic group, we develop positive feelings toward them" (1988, p. 288).

This research also shows that heterogeneously grouped learners experience other positive outcomes, such as increased self-esteem; improved attitudes toward school, specific classes, subject areas, and teachers; and greater ability to appreciate the strengths that diverse people, including the handicapped, can bring to a learning team.

Why does cooperative learning have such positive effects? One reason, according to Parrenas and Parrenas (1990), is that research demonstrates that people from many cultural minorities are relatively more cooperative in their basic social orientation than are members of the white majority. Elements of well-run cooperative learning activities, identified by researchers as accounting for its positive intergroup outcomes, include:

- Positive interdependence. Students perceive that they need each other in order to complete the group's task; that they will "sink or swim together."

- Individual accountability. Each student's performance is frequently assessed and the results are given to the group and to the individual.

- Group processing. Groups discuss how well they are achieving their goals and maintaining effective working relationships among members. Teachers give feedback on how well the groups are working together and input for improvement.

- Interpersonal and small-group skills. Teachers teach social and process skills needed for effective group functioning, including leadership, decision-making, trust-building, communication, and conflict-management skills.

- Face to face promotive interaction. Students promote each other's learning by helping, sharing, and encouraging one another's efforts to learn. Students explain, discuss, and teach what they know to their groupmates.

Many of the researchers identified above examined the achievement effects of cooperative learning as well as its effects on intercultural relations. While achievement outcomes are not the focus of the present report, it is worth noting in passing that these, too, are very positive following cooperative learning—at least equal and sometimes superior to other learning structures.

PREJUDICE REDUCTION AND EMPATHY DEVELOPMENT

Prejudice is defined by Allport as "an aversive or hostile attitude toward a person who belongs to a group, simply because he belongs to that group, and is therefore presumed to have the objectionable qualities ascribed to the group" (1954, p. 8). The researchers and reviewers whose work was consulted in preparation for this report have focused attention on various forms of prejudice—racism, ethnocentrism, sexism, homophobia, anti-Semitism, handicapism, ageism, socioeconomic bias, and others.

Delores Gallo reflects a widely held view of *empathy* when she writes that "the term empathy is used in at least two ways; to mean a predominantly cognitive response, understanding how another feels, or to mean an affective communion with the other" (1989, p. 100). Other writers, such as Haynes and Avery (1979) also identify a behavioral dimension to empathy, characterizing it as including "the ability...to accurately convey [one's] understanding through an accepting response" (p. 527).

Researchers have examined an array of practices aimed at eliminating inaccurate information, negative attitudes and discriminatory behavior (i.e., prejudice) toward cultural groups other than one's own, and replacing these with accurate information, understanding, positive regard, and prosocial behavior (i.e., empathy), with the goal of bringing about improved intergroup relations. Effective practices include:

- **Film, video, and stage presentations that dramatize the unfairness of prejudice and the harm it causes.** (Garcia, Powell, and Sanchez 1990; Gimmestad and DeChiaria 1982; Hart and Lumsden 1989; Pate 1981, 1988)

  Pate writes:

  > Films that are realistic, have a plot and portray believable characters are more effective than message films. When students are able to identify with human emotions, dreams, fears, and problems, they are drawn into the drama and have a clearer picture of the effects of prejudice than they had before (1988, p. 287).

  Researchers have also found that dramatizations with an integrated cast are more effective than those featuring a single ethnic group, and that the most powerful character depictions are those who model desired attitudes or, even better, who model a positive *change* in attitude.

- **Books and other print materials that portray cultural groups in a positive light.** (Garcia, Powell, and Sanchez 1990; Pate 1988; Swadener 1988)

  Favorable presentations of minority groups in fiction and nonfiction print resources have been shown to modify racial and ethnic attitudes, particularly when their use includes sensitive teacher questioning and guidance of class discussion. Materials with multiethnic characters have the most positive effect on attitudes.

- **Initial focus on one's own culture.** (Cotton 1992; Hahn 1983; Ruiz 1982; Swadener 1986)

  Teaching cross-cultural appreciation works best when learning activities progress from (1) a focus on one's own culture, to (2) identification of similarities between one's own culture and a different culture, and finally to (3) attention to differences between one's own and a different culture.

- **Role-taking and simulation games.** (Cotton 1992; Pate 1981, 1988; Swadener 1986, 1988)

  Acting in plays featuring well-known minority representatives or other activities calling upon students to take the perspectives of those who are culturally different from themselves have been shown to alter intergroup attitudes and even behavior in positive directions. Pate writes that "prejudice is reduced considerably by empathic role-playing or other vicarious experiences..." (1988, p. 288).

- **Counterstereotyping.** (Pate 1981, 1988; Swadener 1988)

  Counterstereotyping involves focusing on sample individuals of a given ethnic group who counter the popular stereotype (e.g., Jewish athletes, African-American intellectuals, Hispanic white-collar workers, etc.), or focusing on positive characteristics of whole cultures (e.g., the majority of Puerto Rican New Yorkers are gainfully employed, the majority of African-Americans are not poor).

Walsh (1988) adds that although "Research suggests that direct teaching of prejudice-reduction techniques may be ineffective... indirect teaching of the skills and dispositions needed to combat prejudice is effective" (p. 281). Chief among these prejudice-combating "skills and dispositions" are critical thinking skills and positive self-regard.

DEVELOPING CRITICAL THINKING SKILLS

Besides being characterized by negative feelings and/or discriminatory behavior, prejudice is also characterized by faulty thinking. Common fallacies of reasoning, such as overgeneralization and failure to follow a line of reasoning through to its logical conclusion, are intrinsic features of prejudicial thinking. While a cognitive function such as critical thinking is usually insufficient by itself to eradicate prejudice, research shows that applying critical thinking skills has been effective in reducing prejudice in some subjects by revealing that it is not logically supportable (Byrnes 1988; Pate 1981, 1988; Walsh 1988, etc.).

"How do we teach students antiprejudicial thinking?" asks Walsh. "We infuse a child's school experience with an emphasis on thinking critically about knowledge and life. Thinking critically is the antithesis of prejudicial thinking" (1988, p. 280). Critical habits of mind that have been shown to enhance intergroup relations by reducing prejudice are itemized in Walsh (1988, p. 281):

- Intellectual curiosity—seeking answers to various kinds of questions and problems; investigating the causes and explanations of events; asking why, how, who, when, where
- Objectivity—using objective factors in the process of making decisions; relying on evidence and valid arguments
- Open-mindedness—willingness to consider a wide variety of beliefs as possibly being true
- Flexibility—willingness to change one's beliefs or methods of inquiry; avoiding steadfastness of belief, dogmatic attitude, and rigidity
- Intellectual skepticism—postponing acceptance of a hypothesis as true until adequate evidence is available
- Intellectual honesty—accepting a statement as true when there is sufficient evidence, even though it conflicts with cherished beliefs
- Being systematic—following a line of reasoning consistently to its logical conclusion, avoiding irrelevancies that stray from the issue at hand
- Persistence—supporting points of view without giving up the task of finding evidence and arguments
- Decisiveness—reaching certain conclusions when the evidence warrants
- Respect for other viewpoints—listening carefully to other points of view and responding relevantly to what is said; willingness to admit that one may be wrong and that other ideas one does not accept may be correct.

DEVELOPING HIGH SELF-ESTEEM

The tightest correlation in the research base on intercultural relations is that between positive self-regard and positive regard for those who are culturally different from oneself (Byrnes 1988; Garcia, Powell, and Sanchez 1990; Hart and Lumsden 1989; Mabbutt 1991; Pate 1981, 1988; Peck, Donaldson, and Pezzoli 1990; Walsh 1988). "Probably the most effective approach schools can take to combat prejudice is to improve students' self-concept," writes Pate (1988, p. 288).

Specific self-esteem building activities referenced in the research base include teacher warmth and encouragement; experiencing academic success; working closely with people who have physical or mental handicaps; activities portraying people of one's cultural group or gender, etc. in a positive light; and having teachers and administrators of one's cultural group in one's school.

OTHER FACTORS ASSOCIATED WITH INTERCULTURAL HARMONY

Other elements and practices which have been less thoroughly researched, but which have been shown to be related to positive intercultural relations, include:

- Teaching to students' cultural and individual learning styles (Gay 1988; Sanders and Wiseman 1990)
- Participating in in-depth cross-cultural experiences outside the classroom (Mahan 1982; Peck, Donaldson, and Pezzoli 1990; Foster 1989)
- A multicultural balance of school staff and modeling of positive intercultural relations (Merrick 1988; Moore 1988; Pate 1981; Walberg and Genova 1983)
- Parent participation, particularly when parents of different cultures engage in positive interactions (Foster 1989; Ruiz 1982; Sleeter 1990).

INEFFECTIVE AND DETRIMENTAL PRACTICES

Along with their discoveries of effective activities, researchers have also identified instructional behaviors and other schooling practices that are ineffectual or, worse, that backfire, antagonizing learners and increasing intergroup tensions. These include:

- **"Message" films and plays.** Dramatizations which are thinly veiled vehicles for propagating a particular set of beliefs and values frequently meet with resistance, according to Pate (1981, 1988).

- **Human relations training and direct anti-prejudice lessons.** These often have effects similar to those produced by message dramas (Gabelko 1988; Oliver and Slavin 1989; Pate 1981, 1988; Walsh 1988; Washington 1981) and for similar reasons: "People do not like to be manipulated" (Pate 1988, p. 288). Pate adds that when people perceive that they are required to participate in activities designed to change their thinking, they frequently rebel, with the net effect that the level of prejudice increases.

  These findings have troubled Nina Gabelko of U.C.-Berkeley, who writes:

  > Most activities aimed at reducing prejudice continue to fly in the face of what we know about both learning and prejudice. For example, the most commonly used strategy for prejudice reduction in the classroom is exhortation....few, if any, students who did not previously agree with such principles are affected positively by such appeals (1988, p. 276).

- **Low expectations as expressed in differential treatment of students on the basis of culture.** (Brophy 1983; Cooper and Tom 1984; Cotton 1990; Grossman 1991, etc.)

  Cultural difference, in the broad sense that culture is used in this report, sometimes influences the kinds of expectations that teachers hold for their students and thus results in differential treatment of students. Cotton's review of the teacher expectations literature itemizes the negative treatment that students sometimes receive because of their gender, race/ethnicity, socioeconomic class, and other factors. These include an array of instructional, management, and interpersonal behaviors that favor males, Anglo whites, and high-SES students, and are related to low achievement and low self-esteem on the part of others, producing negative intergroup relations.

- **Academic tracking.** (Klugman and Greenberg 1991; Moore 1988; Oakes 1985; Rich 1987; Walberg and Genova 1983)

  The negative effects of academic tracking on the achievement, attitudes, and behavior of cultural minority students, and consequently on intergroup relations, is clearly demonstrated by research. Rich writes:

  > ...the usual state of affairs is the placement of a disproportionately high percentage of majority children in prestigious groups and a disproportionately high percentage of minority pupils in low status groups. Thus, the net effect of tracking is internal segregation, making the status differential between majority and minority children even more salient and reducing the possibility of positive interethnic contact (p. 496).

Research Findings II: Teachers

The intercultural knowledge, attitudes, and behaviors of teachers have powerful effects on the quality of intercultural relations in schools and classrooms. This being the case, it is important to consider the research on practices designed to prepare teachers to successfully teach culturally diverse student populations and promote harmonious relations among them. Larke (1990a) writes:

> Studies have shown that a high correlation exists among educators' sensitivity (attitudes, beliefs and behaviors toward students of other cultures), knowledge and application of cultural awareness information, and minority students' successful academic performance... Effective teachers in diverse settings have been found to exhibit high levels of cultural sensitivity [which is] exhibited by the modified curriculum and instructional designs

> they incorporate to ensure that all students achieve excellence and equity (p. 24).

Research has also produced findings about kinds of teacher education that do *not* lead to successful teaching and positive intergroup relations. The findings of research conducted with preservice and inservice teachers are substantially the same, and thus they are not separated in the following discussion.

What can we learn from the research on efforts to promote accurate knowledge, positive attitudes, and effective instructional and social behaviors on the part of teachers? For one thing, research shows that brief and superficial training may increase knowledge, but has little or no effect on attitudes or behavior. (Bennett, Niggle, and Stage 1989; Grottkau and Nicolai-Mays 1981; Larke 1990a; Merrick 1988; Sleeter 1990; Washington 1981)

As with the research involving children and youth, the research on preservice and inservice educators indicates that "one-shot" overviews or short-term courses do not produce the outlook and skills needed to work successfully with diverse populations. Larke writes:

> It seems very important that teacher educators recognize and respond to this concern by providing more than one isolated course...one course is insufficient to change the attitudes and behaviors of preservice teachers to appreciate, accept, and respect the diversity of students facing them in future classrooms (1990a, p. 29).

Research conducted on inservice activities has produced similar findings. Grottkau and Nickolai-Mays conclude that:

> ...abbreviated, unsystematic inservice programs offered to veteran teachers which provide limited exposure to the wide array of problems these educators must face in the pluralistic classroom setting may contribute minimally, if at all, to changes in attitudes toward minority groups....short-term interventions may even be detrimental to the preservation of a respect for human diversity (1981, p. 33).

Conversely, in-depth, sustained multicultural training does lead to the development of attitudes and skills needed to work successfully with culturally diverse groups (Burstein 1989; Grottkau and Nickolai-Mays 1989; Larke 1990a,b; Merrick 1988; Sleeter 1990; Wayson 1988). Reporting on a study of intensive, long-term multicultural education for teachers in training, Grottkau and Nickolai-Mays write:

> ...exposure over time to multicultural education experiences does contribute to a statistically significant difference in overall levels of bias, as well as levels of bias toward specific minority populations....any intervention geared toward the enhancement of intergroup relationships must not be contrived or arbitrary but rather controlled and sustained if positive attitudes toward minorities are to be achieved (1989, p. 32).

Well and good, but research also indicates that "teachers frequently do not translate their positive attitudes toward multicultural education and enjoyment of multicultural education classes into the actual delivery of multicultural activities in their classrooms" (Merrick 1988, p. 6). In order for accurate knowledge about diverse cultures and positive attitudes toward them to lead to the provision of true multicultural education in the classroom, considerable skill development is needed, and this calls for even more intensive education and training.

What kinds of teacher skills and behaviors should be emphasized in programs of teacher training to enable them to foster harmonious relationships among their culturally diverse students? A good beginning answer can be drawn from research that has looked into schools and classrooms characterized by positive cross-cultural interactions. Genova and Walberg's large-scale correlational study of successful social integration in schools identifies the following:

- **Racial/ethnic mixing**. While insufficient to guarantee positive outcomes, cultural mixing was found to be an important precondition for their development.
- **Positive staff role models**. Visible and healthy interracial/ethnic relationships prevailed.

- **Security**. Students expressed feeling safe from the threat of intercultural conflict.

- **Staff support for integration**. Beyond role modeling, this refers to openly expressed opinions in favor of integration.

- **Multicultural exposure**. At a minimum, these included activities that present students with a factual accounting of the contributions of various cultures, similarities and differences among cultural groups, etc.

- **Intercultural fairness**. Students perceived that different racial/ethnic groups were treated equally and fairly by school personnel.

In addition to these school-level elements, research has also identified numerous teacher behaviors and other classroom variables as being associated with positive intercultural relationships. They are drawn from the work of Aviram (1987); Campbell and Farrell (1985); Garcia, Powell, and Sanchez (1990); King (1983); Mock (1988); Roberts (1982); Sanders and Wiseman (1990); Simpson (1981); and Swadener (1988). Not surprisingly, many of these features are commonly found in connection with positive classroom environments in general, whether they are culturally diverse or not:

Self-examination and improvement. Effective teachers of culturally diverse classes:

- Reflect on their own values, stereotypes, and prejudices and how these might be affecting their interaction with children and parents

- Engage in staff development activities which can expose and reduce biases and increase skill in working with diverse populations.

Climate and tone. Teachers in interculturally harmonious environments:

- Arrange their classrooms for movement and active learning

- Interact one-to-one with each child at least once daily

- Communicate high expectations for the performance of all students

- Give praise and encouragement

- Communicate affection for and closeness with students through verbal and nonverbal means such as humor, soliciting student opinion, self-disclosure, eye contact, close proximity, smiling, and so on

- Avoid public charting of achievement data

- Give children responsibility for taking care of materials, decorating, greeting visitors, etc.

- Treat all students equally and fairly

- Have classrooms reflect the ethnic heritage and background of all the children in the classroom:

    — Artifacts (weavings, photos, etc.) from various cultures are on display

    — Teachers use displayed items in learning activities

    — Specific items may change, but cultural artifacts are on display throughout the year.

Instructional and management strategies. Effective teachers:

- Form flexible reading groups

- Make use of cooperative learning groups which are culturally heterogeneous and teach students skills for working in these groups

- Offer learning activities congruent with the cultural and individual learning styles and strengths of students

- Teach students social skills related to getting along well together

- Conduct many learning activities that are not graded

- Include some student-selected activities.

Multicultural activities. Successful teachers:

- Provide accurate information about cultural groups via straightforward discussions of race, ethnicity, and other cultural differences
- Teach both about cross-cultural similarities and differences
- Learn a few words of the language and general background information about the religious backgrounds, customs, traditions, holidays, festivals, practices, etc. of students and incorporate this information into learning experiences for them
- Use a variety of materials rather than relying only on the information in textbooks
- Review materials for cultural biases and stereotypes and remove biased items from the curriculum.

Response to intercultural tension. Successful teachers:

- Take issue with culturally demeaning statements, jokes, graffiti, and so on
- Use racial or other intercultural incidents as a springboard for providing information and skills to avoid such incidents.

Contact with parents. Effective teachers:

- Engage parent involvement
- Demonstrate interest in and respect for the family's culture when interacting with parents
- Find out as much as they can about each child's experiences and family situation that can help them to understand and meet the child's needs.

Recommendations

Having identified this array of effective practices and behaviors, what kinds of teacher training do researchers and reviewers recommend? The following recommendations are taken from the work of the American Jewish Committee (1989); Larke (1990a,b); Merrick (1988); Sleeter (1990); and Wayson (1988). Those recommendations focused specifically on either preservice or inservice teachers are so designated; others apply to both.

- Provide more opportunities to raise the cultural sensitivity of preservice teachers through long-term, in-depth multicultural education.
- Develop a field base to multicultural education courses and methods courses to provide an opportunity for working with culturally diverse students—field trips, classroom observations, telecommunications systems between the university and school classrooms, etc.
- Develop mentor programs between preservice teachers and culturally diverse students to raise sensitivity levels about the needs/concerns of diverse students.
- Raise the sensitivity levels of university professors through required or voluntary seminars.
- Seek early field and student teaching sites that are cognizant of diversity and working to promote intercultural harmony.
- Provide instruction to enable teachers to understand students' culturally based and individual learning styles and to match appropriate teaching styles to them.
- Provide instruction in setting up and successfully managing cooperative learning groups; having the teachers themselves experience cooperative learning can enhance their ability to work with students arranged in cooperative groups.
- Provide instruction in methods teachers can use to develop interpersonal awareness and empathy among diverse learners in their classrooms.
- Require training in multicultural education for both administrators and teachers.
- Establish resource centers for multicultural materials; publicize and promote the use of these materials.

Writers on the subject of intercultural relations in schools remind us that working to achieve intercultural harmony makes good sense in the present and also represents an important investment in our economic, social, and political future.

Efforts undertaken to foster intercultural goodwill can also help to refashion our schools into more moral environments. "To become moral communities that are supportive and caring," write Pine and Hilliard in their 1990 anti-racism article, "schools need to model empathy, altruism, trust, cooperation, fairness, justice, compassion, democracy and celebration of diversity" (p. 599).

Key References

Aviram, O. "The Impact of School as a Social System on the Formation of Student Intergroup Attitudes and Behavior." *Journal of Educational Equity and Leadership* 7/2 (1987): 92-108.

Tests a model of the ways that school-controllable factors influence student intergroup attitudes. Offers recommendations based on those aspects of the model that were confirmed by the research. Major findings: Schools affect intergroup attitudes; positive intergroup relations are likely if the principal and teachers are strongly committed to them; activities to reduce the prejudices of parents can be beneficial.

Bennett, C.; Niggle, T.; and Stage, F. *Preservice Multicultural Teacher Education: Predictors of Student Readiness.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA, March 1989. (ED 308 161)

Reviews earlier studies on the impact of a multicultural education course for preservice teachers and reports results of a study suggesting that course design and instructional methods should be modified depending on students' "cognitive orientation"—dualistic, relativistic, or committed—at the beginning of the course. Recommendations are made based on findings.

Brophy, J. "Research on the Self-Fulfilling Prophecy and Teacher Expectations." *Journal of Educational Psychology* 75 (1983): 631-661.

Reviews the literature on self-fulfilling prophecy effects and concludes that a minority of teachers have major expectation effects on their students' achievement.

Burstein, N. D. "Preparing Teachers to Work with Culturally Diverse Students: A Teacher Education Model." *Journal of Teacher Education* 40/5 (1989): 9-16.

Describes the content and outcomes of an intensive, two-year program designed to equip teachers to work with culturally diverse students. The program focused on increasing knowledge and impacting beliefs about members of minority cultural groups, increasing knowledge and use of validated teaching strategies with them, and building skills in working with language minority students. Posttests and log entries indicate that the program was successful.

Byrnes, D. A. "Children and Prejudice." *Social Education* 52/4 (1988): 267-271.

Discusses the ways that racial, ethnic, religious, and other forms of prejudice are learned and perpetuated, together with an overview of research-based approaches which can reduce prejudice. Highlighted are activities which promote social contact between children from different groups, activities to increase student self-esteem, and critical thinking activities that expose the faulty thinking underlying prejudice.

Byrnes, D., and Kiger, G. "Structural Correlates of School Children's Religious Intolerance." *Educational Research Quarterly* 11/3 (1986-87): 18-25.

Surveys responses of suburban and rural, isolated elementary school children to identify correlates of religious tolerance. Among the findings: rural children were less aware of religious diversity than were suburban children and were also more likely to hold inaccurate and negative views of religions other than their own.

Campbell, R. L., and Farrell, R. V. "The Identification of Competencies for Multicultural Teacher Education." *Negro Educational Review* 36/3-4 (1985): 137-144.

Reports the results of a study in which teachers who work with culturally diverse populations and several professors of teacher education were surveyed regarding the competencies most essential for successful teaching in multicultural settings.

Cooper, H. M., and Tom, D. Y. H. "Teacher Expectation Research: A Review with Implications for Classroom Instruction." *The Elementary School Journal* 85 (1984): 77-89.

Reviews research on the effects of teacher expectations on student achievement and attitudes. Outlines research findings on the behaviors through which expectations are communicated. Offers a model of the ways expectations influence outcomes, and provides recommendations for minimizing the negative effects of expressing low expectations.

Cotton, K. *Developing Empathy in Children and Youth*. Close-Up #13. Portland, OR: Northwest Regional Educational Laboratory, 1992.

Reviews research on childrearing behaviors, training activities, and schooling practices that can foster the development of empathetic feeling and behavior among children and older youth. Identifies as effective such practices as role taking, cooperative learning, modeling of caring behavior, and viewing dramatic presentations of the negative consequences of behaving nonempathetically.

Cotton, K. *Educating Urban Minority Youth: Research Findings*. Topical Synthesis #4. Portland, OR: Northwest Regional Educational Laboratory, 1991.

Reviews research on the relationships between a large array of schooling practices and the achievement, attitudes, and social behavior of ethnic minority youth, particularly African Americans and Hispanics, in urban settings. Includes annotated bibliography of approximately 100 sources.

Cotton, K. *Expectations and Student Outcomes*. Close-Up #7. Portland, OR: Northwest Regional Education Laboratory, 1990.

Reviews research on the effects produced when teachers hold and communicate high or low expectations for their students' academic and behavioral performance. Finds that expectations are sometimes formed on the basis of inappropriate factors, such as race/ethnicity, sex, or socioeconomic class, and offers recommendations for creating a positive learning environment for all students.

Davis, E. R. "Effects of Cooperative Learning on Race/Human Relations: Study of a District Program." *Spectrum* 3/1 (1985): 37-43.

Investigates the effect of working in cooperative learning arrangements over an eight-week period on the incidence of interethnic friendships, self-esteem, and perceptions of classroom environment at the elementary, junior high, and high school levels. No significant differences were found between treatment and comparison students on any of the variables studied. Inadequate implementation was blamed for the lack of effects.

DeVries, D. L.; Edwards, K. J.; and Slavin, R. E. "Biracial Learning Teams and Race Relations in the Classroom: Four Field Experiments Using Teams—Games—Tournament." *Journal of Educational Psychology* 70/3 (1978): 356-362.

Studies the effects of the cooperative learning approach, Teams—Games—Tournament, on the incidence of cross-racial friendship and cross-racial choices of classmates to help with schoolwork. Cooperative learning participants exhibited greater numbers and larger percentages cross-racial friendships and help-seeking behaviors than comparison students.

Foster, L. A. "Breaking Down Racial Isolation." *Educational Leadership* 47/2 (1989): 76-77.

Describes the activities and outcomes of "Across the Lines," a project designed to increase mutual knowledge and improve mutual attitudes of students at an all-African-American school and an all-white school. The project has been found to dramatically improve intercultural understanding and appreciation.

Garcia, J.; Powell, R.; and Sanchez, T. *Multicultural Textbooks: How to Use Them More Effectively in the Classroom.* Paper presented at the annual meeting of the American Educational Research Association, Boston, MA, April 1990. (ED 320 262)

Reviews research regarding the effects of using multicultural curriculum materials on students' levels of racial and ethnic bias. Presents the results of a study confirming previous findings about the potential of multicultural materials for increasing knowledge and changing attitudes. The way teachers use these materials accounts for much of the data on effectiveness.

Gimmestad, B. J., and De Chiara, E. "Dramatic Plays: A Vehicle for Prejudice Reduction in the Elementary School." *Journal of Educational Research* 76/1 (1982): 45-49.

Compares the scores of experimental and control students on knowledge and attitude measures regarding several racial/ethnic groups. Experimental children, who had read dramatic plays about the racial/ethnic groups and participated in related curricular activities, exhibited significantly higher levels of knowledge and acceptance toward those groups than did control children.

Grant, C. A.; Sleeter, C. E.; and Anderson, J. E. "The Literature on Multicultural Education: Review and Analysis." *Educational Studies* 12/1 (1986): 47-71.

Submits the array of books on multicultural education to an analysis similar to that conducted earlier with journal articles about multicultural education (see Sleeter and Grant 1985, below). Finds the same kinds of differences in the use of the term "multicultural education" as were identified in the journal article review. Offers recommendations for future writings on multicultural education.

Grossman, H. "Multicultural Classroom Management." *Contemporary Education* 62/3 (1991): 161-166.

Identifies research findings about the differences in learning style and other traits that are observable among students of different cultural backgrounds and argues that awareness of these differences is essential to fair and effective classroom management in culturally diverse classrooms. Also cites research on harmful classroom management approaches often taken by teachers who are either knowingly or inadvertently biased against students from cultural minorities and/or low SES families.

Grottkau, B. J., and Nickolai-Mays, S. "An Empirical Analysis of a Multicultural Education Paradigm for Preservice Teachers." *Educational Research Quarterly* 13/4 (1989): 27-33.

Compares the levels of racial/ethnic bias held by senior preservice education teachers who had experienced extensive multicultural training with the level of bias noted in senior students in other majors who had not had such training. Also compares freshman preservice educators who had taken a brief human relations course with freshman who had not, again in terms of racial/ethnic bias. Extensive training resulted in significantly less social bias; a brief course had no effect.

Grundy, T. "ESL/Bilingual Education: Policies, Programs, and Pedagogy." *OSSC Bulletin* 36/4 (December 1992).

Examines general policies and principles of English-as-a-Second-Language (ESL) education and describes ESL policy and programs in the State of Oregon. Includes research-supported assertions regarding

intercultural relations of ESL students with other students in settings characterized by diversity.

Hahn, S. L. "Building the Foundation for Global Citizenship: A Pilot Project." *The Modern Language Journal* 67/2 (1983): 152-158.

Describes the activities and outcomes of an instructional program designed to familiarize primary-level children with the Mexican culture as experienced by Mexican children their own age. Results indicated considerable expansion of knowledge and positive attitudes on the part of the mostly non-Hispanic program children.

Hart, T. E., and Lumsden, L. "Confronting Racism in the Schools." *OSSC Bulletin* 32/9 (May 1989).

Draws from research on the nature and prevalence of racism and on practices which have been shown to reduce prejudice. Describes programs for prejudice reduction and guidelines for program planning. Lists resources agencies and contact information.

Johnson, D. W.; Johnson, R. T.; and Scott, L. "The Effects of Cooperative and Individualized Instruction on Student Attitudes and Achievement." *The Journal of Social Psychology* 104 (1978): 207-216.

Compares an individualized and a cooperative learning approach in terms of their effects on the achievement and attitudes of white students in grades five and six. Cooperative learning students were grouped heterogeneously by gender and academic ability. Both student attitudes and achievement were more positive in the cooperative arrangement.

King, E. W. "Promising Practices in Teaching Ethnically Diverse Children." *Momentum* 14/1 (1983): 38-40.

Enumerates the findings from a research project conducted with 32 classrooms of children four to eight years old and their teachers in the Denver Public Schools. Correlations were identified between an array of teacher behaviors and the achievement and progress of children in ethnically diverse classrooms.

Klugman, J., and Greenberg, B. "Program Helps Identify, Resolve Problems in Multicultural High Schools." *NASSP Bulletin* 75/539 (1991): 96-102.

Describes the activities of and responses to a program developed by the Community Relations Service of the Justice Department to help improve intercultural communication and relations in secondary schools. CRS staff facilitate workshop activities designed to identify and make plans for addressing problems relating to intercultural tensions. CRS follow-up activities depend on the nature of problems at each program site.

Larke, P. J. "Cultural Diversity Awareness Inventory: Assessing the Sensitivity of Preservice Teachers." *Action in Teacher Education* 12/3 (1990): 23-30.

Reports findings regarding the cultural sensitivity of preservice teachers following participation in a required multicultural education course. Concludes that one multicultural education course is insufficient to prepare teachers to work successfully with culturally diverse students and their parents. Offers recommendations to improve teachers' preparation in this area.

Larke, P. J. "The Minority Mentorship Project: Changing Attitudes of Preservice Teachers for Diverse Classrooms." *Action in Teacher Education* 12/3 (1990): 5-11.

Identifies the effects of a long-term, intensive program aimed at reducing racial and ethnic bias on the part of preservice teachers. Composed of multicultural education, human relations training, and cross-cultural mentoring, the program was successful in increasing the knowledge and improving the attitudes of participants toward their Mexican-American and African-American mentees.

Mabbutt, R. *Reducing Bias: Research Notes on Racism in America*. Boise, ID: Idaho Human Rights Commission, 1991.

Cites findings from research on the nature of racial prejudice in the U.S. and derives implications for educational institutions and other organizations in Idaho. Among key findings: Racial prejudice is learned very early in children's lives and can be changed only with difficulty; social class prejudice interacts with racial prejudice; and people with high self-esteem exhibit relatively low levels of prejudice.

Mahan, J. M "Native Americans as Teacher Trainers: Anatomy and Outcomes of a Cultural Immersion Project." *Journal of Educational Equity and Leadership* 2/2 (1982): 100-111.

Uses a variety of measures to evaluate the effectiveness of an intensive cultural immersion project designed to increase the knowledge of preservice teachers about Navajo and Hopi cultures, and to improve their attitudes toward and skills in working with Native American student populations in Bureau of Indian Affairs schools. Participants met with unqualified success in all areas evaluated.

Merrick, R. M. *Multicultural Education: A Step Toward Pluralism*. South Bend, IN: Indiana University at South Bend, April 1988. (ED 302 451)

Summarizes 31 articles on different aspects of multicultural education—state and national requirements for teachers, teachers' attitudes and practices, impact of college courses on student's knowledge and attitudes, practices used with children and their effects, and the presentation of racial/ethnic groups in texts and other classroom materials.

Moore, H. A. "Effects of Gender, Ethnicity, and School Equity on Students' Leadership Behaviors in a Group Game." *The Elementary School Journal* 88/5 (1988): 515-527.

Compares the leadership behaviors in cooperative groups displayed by Anglo and Hispanic students in "high-equity" schools with those displayed by students in "low-equity" schools. Among the findings was that all students in high-equity schools exhibited more verbal and nonverbal leadership behaviors than students in the low-equity schools. Hispanic students exhibited far fewer leadership behaviors than Anglos in low-equity school settings.

Oakes, J. *Keeping Track: How Schools Structure Inequality*. New Haven, CT: Yale University Press, 1985.

Presents findings on the effects of ability grouping—and particularly secondary-level academic tracking—on student achievement, attitudes, and behavior. Concludes that tracking is detrimental to students and discusses the dilemmas posed by its persistent use in schools.

Parrenas, F. Y., and Parrenas, C. S. *Cooperative Learning, Multicultural Functioning, and Student Achievement*. San Bernardino, CA: San Bernardino School District, 1990. (ED 337 540)

Reviews research on the use of cooperative learning in multiracial, multiethnic settings and concludes that cooperative learning, particularly when it involves group tasks and individual accountability, is the most appropriate instructional strategy for culturally diverse school populations.

Parsons, M. A. "Metropolitan School Desegregation and Parent and Student Attitudes: A Longitudinal Case Study." *The Urban Review* 16/2 (1984): 102-115.

Investigates the effects of a desegregation effort in five Delaware school districts on the racial attitudes and attitudes toward education held by black and white parents and students. Surveys were conducted from the year before desegregation to three years following. Neither racial nor educational attitudes of participating groups were significantly affected.

Pate, G. S. "Research on Prejudice Reduction." *Educational Leadership* 38/4 (1981): 288-291.

Reviews research on various approaches to reduce prejudice, chiefly in educational settings. Among the key findings is that working in interracial, interethnic learning teams fosters positive attitudes and friendships across racial and ethnic lines.

Pate, G. S. "Research on Reducing Prejudice." *Social Education* 52/4 (1988): 287-289.

Cites findings from research on different approaches that have been undertaken to reducing racial, ethnic, and religious prejudice. Engaging dramatic presentations, cooperative learning, critical thinking, and self-esteem-building activities are identified as particularly effective in reducing levels of prejudice within and outside of school settings.

Peck, C. A.; Donaldson, J.; and Pezzoli, M. "Some Benefits Nonhandicapped Adolescents Perceive for Themselves from Their Social Relationships with Peers Who Have Severe Handicaps." *Journal of the Association for Persons with Severe Handicaps* 15/4 (1990): 241-249.

Identifies, via a study undertaken with nonhandicapped adolescents, benefits that accrue to nonhandicapped students in programs that bring them into frequent contact with young people who have severe handicaps. Subjects reported many personal benefits that emerged from their contacts with the severely handicapped.

Rich, Y. "The Potential Contribution of School Counseling to School Integration." *Journal of Counseling & Development* 65/9 (1987): 495-498.

Cites research on schooling practices which can foster improved minority achievement and self-esteem, as well as improved intercultural relations. Identifies actions that school counselors can undertake to help foster the use of these validated practices in desegregated school settings.

Roberts, G. J. *Teaching Strategies for More Effective Integration*. Springfield, MA: Springfield Public Schools, November 1982. (ED 236 253)

Draws from a broad base of research to identify instructional and classroom management practices associated with high levels of interracial and interethnic harmony. Findings emerge from two sources: classroom observational research and surveys of teachers whose classrooms exhibited positive cross-cultural relations.

Robinson, M. G. "Awareness Program Helps Children Understand Special Needs." *Education Unlimited* 1/2 (1979): 25-27.

Describes a program designed to increase understanding of and empathy with disabled children on the part of nonhandicapped children. Experiential activities which approximate disabling conditions, exposure to appliances used by the handicapped, and opportunities to meet and interact with disabled adults are featured.

Rogers, M.; Miller, N.; and Hennigan, K. "Cooperative Games as an Intervention to Promote Cross-racial Acceptance." *American Educational Research Journal* 18/4 (1981): 513-516.

Investigates the effects produced when black and white female students in a desegregated elementary school are arranged in cross-racial groups for playground games. Both immediate and delayed observations showed increases in cross-racial prosocial interactions following the cooperative game playing experience.

Ruiz, A. J. *Modifying Racial Attitudes of Second Graders in a Multicultural Setting Using a Curriculum Approach*. Practicum Report. Ft. Lauderdale, FL: Nova University, July 1982. (ED 248 991)

Reports the outcomes of an intervention in which 27 second graders, representing nine different national origins, experienced a 12-week program designed to reduce negative racial and ethnic bias. Changes from pretest to posttest indicated a significant reduction in students' level of bias.

Sanders, J. A., and Wiseman, R. L. "The Effects of Verbal and Nonverbal Teacher Immediacy on Perceived Cognitive, Affective, and Behavioral Learning in the Multicultural Classroom." *Communication Education* 39/4 (1990): 341-353.

Offers findings from a study of the effects of verbal and nonverbal "teacher immediacy" (defined as communication which enhances closeness with another) on the attitudes and learning of white, black, Hispanic and Asian students. Many

behaviors were pancultural in their effects, but there were some different noted across the different cultural groups.

Schwarzwald, J.; Fridel, S; and Hoffman, M. "Carry-Over of Contact Effects From Acquainted to Unacquainted Targets." *Journal of Multilingual and Multicultural Development* 6/3 (1985): 297-311.

Investigates the effects of cross-cultural contact between Israeli junior high school students of Eastern (Middle Eastern and North African) descent and those of Western (European and American) descent. Contact reduced ethnic stereotyping and fostered positive feelings among students who were acquainted with one another, but students continued to hold stereotypic views of students with whom they were not acquainted.

Simpson, C. "Classroom Organization and the Gap Between Minority and Non-Minority Student Performance Levels." *Educational Research Quarterly* 6/3 (1981): 43-53.

Compares the differential between minority and nonminority performance levels in third grade classes organized unidimensionally with the differential in classes organized multidimensionally. Multidimensional organization—characterized by many activities that are not graded, a large range of instructional materials, incorporation of some non-language media into learning activities, and some student-selected activities—resulted in a significantly smaller gap between minority and nonminority performance levels than that noted in unidimensional classes.

Slavin, R. E. "Cooperative Learning: Applying Contact Theory in Desegregated Schools." *Journal of Social Issues* 41/3 (1985): 45-62.

Reviews research on the effects of cooperative learning on cross-racial friendships and discusses findings in relation to Gordon Allport's "contact theory," a set of principles specifying conditions under which interracial contact leads to improved relationships. Cooperative learning has been found to increase the number and depth of interracial friendships.

Slavin, R. E. "Cooperative Learning and Student Achievement." Chapter 5 in *School and Classroom Organization*, edited by R. E. Slavin. Hillsdale, NJ: Erlbaum, 1989.

Reviews research on the social and particularly the achievement effects of cooperative learning groups organized heterogeneously by race, sex, academic ability level, and other factors. Finds that cooperative learning produces outcomes equal or superior to those of other learning structures.

Slavin, R. E. "Research on Cooperative Learning: Consensus and Controversy." *Educational Leadership* 47/4 (1990): 52-54.

Identifies areas of agreement and disagreement among researchers and reviewers who have investigated the academic and social outcomes of cooperative learning. Main finding: for K-12, cooperative learning structures characterized by group goals and individual accountability are more beneficial to students' achievement than other structures.

Slavin, R. E., and Oickle, E. "Effects of Cooperative Learning Teams on Student Achievement and Race Relations: Treatment by Race Interactions." *Sociology of Education* 54/3 (1981): 174-180.

Compares the learning and cross-racial friendship effects of cooperative learning and non-team learning on students in grades six through eight, and compares the differential effects of the cooperative learning approach on the achievement and cross-racial friendships of black and white students. Cooperative team students outperformed non-team students and evidenced more cross-racial friendships. These effects were most pronounced with the black subjects.

Sleeter, C. E. "Doing Multicultural Education Across the Grade Levels and Subject Areas: A Case Study of Wisconsin." *Teaching & Teacher Education* 5/3 (1989): 189-203.

Reports the results of a survey of teachers in the state of Wisconsin who had received instruction in multicultural education as

undergraduates. Concludes, as do many other research studies, that participating in only a basic multicultural education course is insufficient to prepare teachers to work successfully with culturally diverse student populations.

Sleeter, C. E "Staff Development for Desegregated Schooling." *Phi Delta Kappan* 72/1 (1990): 133-140.

Discusses the need for the kinds of staff development that can improve teachers' approaches to working with culturally diverse classrooms, thereby improving minority student achievement and enhancing cross-cultural relations. Cites research findings and includes descriptions of "promising practices" for staff development in desegregated schools.

Sleeter, E. E., and Grant, C. A. "An Analysis of Multicultural Education in the United States." *Harvard Educational Review* 57/4 (1987): 421-444.

Reviews the "multicultural education" literature and finds that much of it concerns only limited aspects of what the authors regard as true multicultural education. Organizes the literature according to the ways different authors use the term "multicultural education" and points out the shortcomings of most of these conceptions.

Swadener, E. B. *Implementation of Education That Is Multicultural in Early Childhood Settings: A Case Study of Two Day Care Programs.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA, April 1986. (ED 273 384)

Presents results of an observational study in two urban day care centers in the midwestern U.S. Activities to promote gender and ability-disability equity were extensive and had positive effects. Those aimed at fostering racial and cultural equity were present but less extensive.

Swadener, E. B. *Teaching Toward Peace and Social Responsibility in the Early Elementary Years: A Friends School Case Study.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA, April 1988. (ED 316 321)

Presents and discusses findings from a one-year case study of the kinds of activities carried out to enable children to "learn social concepts related to acceptance and understanding of human diversity" and related beliefs and skills. The subjects were children in grades K-4 in a Friends (Quaker) school in rural Pennsylvania. Learning about the work of peace activists, active listening and perspective-taking exercises, and developing group process skills were identified as key elements.

Walberg, H. J., and Genova, W. J. "School Practices and Climates That Promote Integration." *Contemporary Educational Psychology* 8/1 (1983): 87-100.

Analyzes secondary students' perceptions regarding several schooling practices and school climate variables in order to identify factors conducive—and antithetical—to harmonious racial/ethnic integration. Cross-racial contact, positive school staff role modeling, a sense of security, positive interracial attitudes on the part of school staff, multicultural learning activities, and a sense of racial fairness were among the factors positively correlated with successful integration.

Warring, D.; Johnson, D. W.; Maruyama, G.; and Johnson, R. "Impact of Different Types of Cooperative Learning on Cross-Ethnic and Cross-Sex Relationships." *Journal of Educational Psychology* 77/1 (1985): 53-59.

Studies, in two experimental designs, the effect of cooperative learning on cross-sex and cross-ethnic student relationships. Participants in all cooperative learning approaches voluntary involved themselves in more cross-sex and cross-ethnic contacts in the classroom, school, and home than students working individualistically. The cooperative structure involving inter-group cooperation produced the most positive results.

Washington, V. "Impact of Antiracism/Multicultural Education Training on Elementary Teachers' Attitudes and Classroom Behavior." *The Elementary School Journal* 81/3 (1981): 186-192.

Investigates the effects of a week-long inservice program designed to impact the attitudes and instructional behaviors of elementary teachers in one North Carolina district. The antiracism portion of the training was found to *increase* overt racial polarization, and the multicultural education portion had no effect on teaching behaviors. Recommendations for training redesign are presented.

General References

Allport, G. *The Nature of Prejudice*. Reading, MA: Addison-Wesley, 1954.

Cites the characteristics of social prejudice, discusses the ways that prejudicial thinking develops in people and is maintained over time, and identifies conditions under which bringing people of different racial/ethnic groups into contact with one another can decrease prejudice.

American Jewish Committee. *Educating the Newest Americans: Report of the Task Force on New Immigrants and American Education*. New York: American Jewish Committee/Columbia University Institute for Urban and Minority Education, 1989. (ED 314 542)

Provides information on rapidly occurring demographic changes due to immigration—particularly immigration of Hispanics and Asians—and provides recommendations for the education of children and adults in an increasingly diverse and technological society.

Arkansas State Department of Education. *Multicultural Reading and Thinking (McRAT) Report*. Little Rock, AR: Arkansas State Department of Education, January 1991. (ED 336 402)

Describes the McRAT program of staff development and student activities and provides results of a study of the program on student outcomes following its first year of implementation with fourth, fifth, and sixth graders. The learning gains of McRAT students were significantly higher than those of control students, regardless of racial/ethnic or socioeconomic status.

Banks, J. A. "Cultural Diversity and Intergroup Relations: Implications for Educational Reform." In *Multicultural Education: Knowledge and Perceptions*, edited by C. A. Heid. Bloomington, IN: Center for Urban and Multicultural Education, Indiana University, 1988. (ED 312 196)

Discusses the increase in cultural diversity in the United States, problems that have arisen in connection with this increase, psychological effects of social prejudice against minority cultures, schooling practices that impinge on students' self-worth and self-concepts as learners, and recommendations for improving intercultural relations.

Banks, J. A., and Banks, C. A. M., eds. *Multicultural Education: Issues and Perspectives*. Boston: Allyn and Bacon, 1989.

Provides information for preservice and inservice teachers to help equip them to work with America's increasingly diverse school population. Focuses on race, ethnicity, social class, religion, gender, language minorities, and exceptionality. Gives special attention to appropriate assessment and parent involvement.

Briscoe, D. B. "Designing for Diversity in School Success: Capitalizing on Culture." *Preventing School Failure* 36/1 (1991): 3-18.

Reports on research designed to (1) identify cultural characteristics inhering in different ethnic groups which have implications for learning and (2) identify curricular and instructional approaches which are responsive to the cultural characteristics of different groups. Offers recommendation based on research findings.

Conard, B. D. "Cooperative Learning and Prejudice Reduction." *Social Education* 52/4 (1988): 283-286.

Identifies benefits which can accrue from the use of small-group cooperative learning activities in classrooms, with special emphasis on the power of this learning structure for reducing the incidence of prejudice. Gives an example of a cooperative learning exercise focused on world hunger.

Fritzsche, K. P. *Prejudice and Underlying Assumptions*. Strasbourg, France: Paper presented at the Educational Research Workshop on History and Social Studies, Braunschweig, West Germany, September 1990. (ED 330 637)

Introduces a framework for textbook researchers to use to identify racial and ethnic bias or prejudice in texts used in schools in Europe. The framework is intended to enable reviewers to discern whether textbooks—either consciously or unconsciously—inaccurately represent ethnic groups and promote prejudices, stereotypes, or racist ideas.

Gabelko, N. H. "Prejudice Reduction in Secondary Schools." *Social Education* 52/4 (1988): 276-279.

Discusses the ways that secondary teachers can help their students to develop the "cognitive sophistication" that mediates against prejudicial thinking. Activities that subject prejudicial phenomena to examination using higher-order cognitive skills are described.

Gallo, E. "Educating for Empathy, Reason and Imagination." *The Journal of Creative Behavior* 23/2 (1989): 98-115.

Argues that, although empathy is sometimes thought to be an emotional response that is unrelated or possibly detrimental to reasoning, empathy in fact fosters both creative and critical thinking, and thus its development should be adopted as an important educational goal.

Gay, G. "Designing Relevant Curricula for Diverse Learners." *Education and Urban Society* 20/4 (1988): 327-340.

Discusses the growing need for multicultural programs in the schools, identifies barriers to the design and implementation of truly multicultural programs, and provides guidelines for evaluating curriculum quality.

Gibbs, J. *Tribes: A Process for Social Development and Cooperative Learning*. Santa Rosa, CA: Center Source Publications, 1987.

Details and development and functioning of the Tribes program, in which children are organized into long-term, heterogeneous peer groups or "Tribes" for learning and interpersonal support. Outlines an array of activities suitable for use by student Tribes and their teachers.

Gottfredson, G. D.; Nettles, S. M.; and McHugh, B. *Meeting the Challenges of Multicultural Education: A Report from the Evaluation of Pittsburgh's Prospect Multicultural Education Center*. Baltimore, MD: Center for Research on Effective Schooling for Disadvantaged Students, Johns Hopkins University, March 1992.

Presents information on the implementation of a middle school demonstration program begun in the Pittsburgh schools in 1989. Many program elements have been implemented, but there is still considerable resistance on the parts of teachers and parents to some program aspects, i.e., the steps taken to eliminate academic tracking.

Haynes, L. A., and Avery, A. W. "Training Adolescents in Self-Disclosure and Empathy Skills." *Journal of Community Psychology* 26/6 (1979): 526-530.

Compares scores on measures of self-disclosure and empathic understanding of high school juniors who participated in a training program in these areas with the scores of those who did not. Experimental students significantly outperformed controls.

Henington, M. "Effect of Intensive Multicultural, Non-Sexist Instruction on Secondary Student Teachers." *Educational Research Quarterly* 6/1 (Spring 1981): 65-75.

Reports the effects of a multicultural and nonsexist education program on the cultural and gender-related knowledge and attitudes of preservice secondary teachers. Program participants exhibited greater knowledge and better attitudes than controls on both immediate and delayed assessments. Unfortunately, detail about program content is not provided.

Lewis, A. C., and Hayes, S. "Multiculturalism and the School Counseling Curriculum." *Journal of Counseling & Development* 70/1 (1991): 119-125.

Discusses the importance of training preservice school counselors to work with culturally diverse student populations, and describes the content of training provided at Western Washington University to enable counseling students to work effectively with children of different cultural backgrounds. Also describes a case study of counselor-client interaction.

Lewis, F. N., and Margold, J. *Responsive Multicultural Basic Skills Handbook for Teachers and Parents*. San Francisco: Far West Laboratory for Educational Research and Development, 1981.

Provides background information about the interaction among culture, learning styles, and learning success and outlines methods that teachers and parents can use to increase children's understanding of and respect for their own and different cultures. Addresses ways to combine multicultural and academic curricula.

Lockwood, A. T. "Education for Freedom." *Focus in Change* 7 (Summer 1992): 3-7.

Quotes and discusses the views on cultural pluralism and multicultural education held by Dr. James A. Banks, Director of the Center for Multicultural Education at the University of Washington in Seattle. Key concept: "...multicultural education is for *all* children."

Lockwood, A. T. "Managing Multiculturalism." *Focus in Change* 7 (Summer 1992): 8-11.

Discusses the development of multicultural education programming in the New York City public schools since its inception in 1987. Includes material excerpted from the school board's "Statement of Policy on Multicultural Education and Promotion of Positive Intergroup Relations."

Lomotey, K. "Cultural Diversity in the School: Implications for Principals." *NASSP Bulletin* 73/521 (1989): 81-88.

Summarizes research on the disproportionately low achievement of African Americans and other minorities and on the kinds of schooling practices shown to improve academic and social outcomes for culturally diverse student populations.

Mock, K. R. *Multicultural and Anti-Racist Education: The Developmental Rationale and Practical Implications*, 1988. (ED 304 243).

Discusses the cultural biases typically present in curriculum, instructional methods, instructional materials, and assessment techniques. Offers recommendations for fostering a multicultural classroom environment, and provides a profile of a "successful educator in a multicultural/multiracial society."

Oliver, E. A., and Slavin, D. "The NCBI Prejudice Reduction Model: A Process for Building a Multicultural Campus Community." *CUPA Journal* 40/3 (1989): 44-47.

Offers a description of the National Coalition Building Institute (NCBI) Prejudice Reduction Model designed to improve intercultural and other intergroup relations. The program has been used on over 80 campuses in the U.S. and abroad to reduce racism, sexism, anti-Semitism, homophobia, and other forms of prejudice.

Olsen, L., and Mullen, N. A. "Embracing Diversity: California Teachers Are Finding New Ways to Bridge Cultural Chasms." *Equity and Choice* 7/2-3 (1991): 5-17.

Shares the results of in-depth interviews with 36 California teachers who work with ethnically diverse student populations. Identifies professional activities pursued by these teachers in the areas of second language acquisition, multicultural curriculum development, second language immersion, and prejudice reduction/intergroup relations to improve their effectiveness in working with culturally diverse groups.

Payne, C. "Multicultural Education and Racism in American Schools." *Theory Into Practice* 23/2 (1984): 124-131.

Discusses the ways in which racist policies and practices have been—and still are—embedded in the U.S. educational system. Argues that true multicultural education can help to guide people from a racist stage of personality development to a less racist or nonracist stage. Provides a sample antiprejudice multicultural education unit.

Pine, G. J., and Hilliard, A. G. "Rx for Racism: Imperatives for America's Schools." *Phi Delta Kappan* 71/8 (1990): 593-600.

Discusses the nature of racism in American society and the ways that racial and cultural biases are perpetuated in the public education system. Argues that the schools can have a powerful, positive effect on racism in society and offers recommendations to educators and policymakers.

Ploumis-Devick, E. *Appreciating Differences: Teaching and Learning in a Culturally Diverse Classroom.* Hot Topics: Usable Research Series. Greensboro, NC: SouthEastern Regional Vision for Education (SERVE), February 1992.

Provides definitions and descriptions, followed by research-based guidelines for and specific examples of classroom activities that can promote learning and social harmony in culturally diverse settings. Includes listings of resource materials and organizations.

Sapon-Shevin, M. "A Minicourse for Junior High Students." *Social Education* 52/4 (1988): 272-275.

Describes the purposes and activities of a two-week minicourse designed to raise the consciousness of seventh grade participants regarding people with disabilities. Activities provided information, engaged students in vicarious experiences regarding the situation of disabled people in society, and created opportunities for participants to engage in advocacy activities aimed at improving societal conditions for the disabled.

Sears, J. T. "Helping Students Understand and Accept Sexual Diversity." *Educational Leadership* 49/1 (1991): 54-56.

Discusses the need for anti-harassment guidelines in schools that can help protect gay and lesbian students from mistreatment by their peers. Describes current sex education programs as typically being "emotionally dry, moralistically rigid, and intellectually sterile," and calls for new approaches which encourage student inquiry and address a broader range of topics of interest to them.

Seiter, D. M. "Reducing Prejudice in the Classroom." *Social Education* 52/4 (1988): 302-303.

Provides synopses of several resources that have been indexed and abstracted by Educational Resources Information Center (ERIC) staff. While much of the information is directed at the classroom teacher, some resources point to the need for institutional changes to reduce/eradicate prejudice.

Sharan, Y., and Sharan, S. *Expanding Cooperative Learning Through Group Investigation.* New York: Teachers College Press, 1992.

Offers an in-depth discussion of Group Investigation, a cooperative learning method which emphasizes active inquiry, student interaction, interpretive activities to give meaning to what is learned, and intrinsic motivation. Philosophical foundation, components, examples, outcomes, and recommended teacher training are described.

Sonnenschein, F. M. "Countering Prejudiced Beliefs and Behaviors: The Role of the Social Studies Professional." *Social Education* 52/4 (1988): 264-266.

Discusses several criminal acts in contemporary news reports that were the result of racial, ethnic, religious, and other forms of prejudice. Identifies approaches educa-

tors can take to fostering positive intergroup relationships and highlights, in particular, the kinds of anti-prejudice activities that can be undertaken in elementary and secondary social studies classes.

Taylor, O. L. *Cross-Cultural Communication: An Essential Dimension of Effective Education*. Washington, DC: The Mid-Atlantic Equity Center, The American University, 1987.

Provides a rationale for improving educators' expertise in cross-cultural communication skills and offers an overview of concepts and practices related to effective cross-cultural communications. Includes information on reducing/eliminating cultural bias from tests and placement measures.

Teaching Tolerance, a semi-annual publication of the Southern Poverty Law Center, a nonprofit legal and education foundation based in Montgomery, Alabama. The journal is free to educators. Write to: *Teaching Tolerance*, 400 Washington Ave., Montgomery, Alabama 36104.

Offers research findings, program descriptions, classroom teaching ideas, reviews, statistical information, and so on, aimed at helping teachers to foster interracial, interethnic, and other kinds of intergroup harmony among their students.

Trachtenberg, S. J. "Multiculturalism Can Be Taught Only by Multicultural People." *Phi Delta Kappan* 71/8 (April 1990): 610-611.

Identifies some of the barriers to the widespread implementation of multicultural education in the schools and advances reasons that adopting a truly multicultural perspective is beneficial to and urgently needed by our nation.

Walsh, D. "Critical Thinking to Reduce Prejudice." *Social Education* 52/4 (1988): 280-282.

Discusses the nature of prejudice and describes the ways that the development of critical thinking skills can enable students to avoid prejudicial thinking. Describes the kinds of classroom environments and exercises that can help students to build skills in critical thinking.

Yao, E. L. *Implementation of Multicultural Education in Texas Public Schools*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL, 1985. (ED 264 995)

Presents survey results gathered from teachers in 63 Texas public schools to determine the kinds and extent of multicultural education activities taking place in their schools. In general, findings included that most schools gave relatively little attention to multicultural materials, programming, or staff development. The author offers several recommendations for expanding multicultural activities.

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SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Close-Up #15

Developing Employability Skills

Kathleen Cotton

Employability skills are not job specific, but are skills which cut horizontally across all industries and vertically across all jobs from entry level to chief executive officer.
—Sherer and Eadie 1987, p. 16

Introduction

Discussions of the need for educational reform and restructuring typically include concern about the gap between the skill requirements for entry-level employment and the skill levels of entry-level job applicants (Stasz 1993, p. 1).

Business and industry representatives express considerable dissatisfaction with the general level of preparedness of prospective entry-level employees (Committee for Economic Development 1985, p. 17). According to research conducted by the Secretary's Commission on Achieving Necessary Skills, "more than half our young people leave school without the knowledge or foundation required to find and hold a good job" (SCANS 1991, p. xv).

Employers' dissatisfaction with young job applicants is not primarily due to inadequate technical knowledge or skill. Wentling's observation is typical:

> A review of the literature indicated that employers have no quarrel with the skills performance of today's graduates, but they do have serious reservations when it comes to their nontechnical abilities (1987b, p. 354).

Another name for these "nontechnical abilities" is *employability skills*. "Simply stated," write Buck and Barrick (1987), "employability skills are the attributes of employees, other than technical competence, that make them an asset to the employer" (p. 29). As detailed later in this report, these employability skills include reading, basic arithmetic and other *basic skills*; problem solving, decision making, and other *higher-order thinking skills;* and dependability, a positive attitude, cooperativeness, and other *affective skills and traits.*

The Employability Skills Literature

Findings cited in this report are drawn from 63 documents pertaining to the topic of employability skills. Of these, the research documents—41 studies, reviews, and evaluations—address questions such as:

- What skills and traits do employers value most in prospective entry-level employees?

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School, Community and Professional Development Program

- Why have employability skills become so important in contemporary workplaces?
- What educational practices has research shown to be effective in imparting employability skills and traits to students?

The other 22 documents are related writings—chiefly opinion pieces, curriculum guides, program descriptions, and guidelines for program development—which complement the findings in the research reports.

Subjects in the research on employer-preferred skills are business and industry representatives, usually either CEOs or personnel officers. Subjects in the research on effective practices include instructors and secondary students in both vocational and regular classrooms.

Researchers looked at a variety of classroom management and instructional practices, including indoctrinational versus democratic teaching strategies; cognitive versus experiential learning; and the effects of different kinds of teacher-student relationships, classroom structures, teacher expectations, degrees of teacher autonomy, and others.

Research Findings I: Employers and the Workplace

Employers want entry-level employees to possess an array of basic, higher-order, and affective employability skills. (Baxter and Young 1982; Beach 1982; Buchanan 1990; Buck and Barrick 1987; Busse 1992; Carnevale, Gainer, and Meltzer 1988; Commission on Skills 1990; Committee for Economic Development 1985; Gregson and Bettis 1991; Harris and Sweet 1991; Herr and Johnson 1989; Junge, Daniels, and Karmos 1984; Kantner 1985; Lankard 1990; Lundy 1984; Nagle 1987; Neal 1983; Packer 1992; Painter 1985; Poole 1985, 1989; Rosove 1982; SCANS 1991, 1992, 1993, n.d.; Sherer and Eadie 1987; Stasz 1990, 1993; Stemmer and Smith 1992; Stevenson and Bowers 1986; Stone, et al. 1990; Van Shelhamer and Bishop 1984; Wentling 1987; and Young 1986)

The "critical employability skills" identified by these different researchers vary considerably in the way they are organized. One researcher/developer identified 76 different skills in nine categories (Poole 1985); another research group named 36 skills and traits in eight categories (SCANS 1991); and so on.

There is also, however, a great deal of agreement among the skills and traits identified. Comparisons of the employability attributes listed by the different researchers revealed those that were cited most frequently. These were then organized into the three categories of *basic skills*; *higher-order thinking skills*; and *affective skills and traits*, as shown in the display on the following page.

Some general comments are in order about this display of findings. For one thing, while a number of employers identified the "3 R's" and various higher-cognitive abilities as critical employability skills, virtually *all* of them named affective characteristics—particularly "dependability," "responsibility" and "positive attitude toward work"—as vital. It should also be noted that, within each of the three categories, the skills and traits are arranged in descending order according to the frequency with which each was cited in the research. Finally, when respondents cited mathematics and/or oral and written communication skills as key employability skills, they often used qualifiers, e.g., *simple* arithmetic, *basic* reading, *brief* memo writing—and frequently noted that applicants need not be highly educated, but possess a solid foundation of these skills.

Employers value these generic employability skills above specific occupational skills. (Baxter and Young 1982; Beach 1982; Busse 1992; Carnevale, Gainer, and Meltzer 1988; Commission on Skills 1990; Committee for Economic Development 1985; Greathouse 1986; Junge, Daniels, and Karmos 1984; Kantner 1985; Lankard 1990; Natriello 1989; Neal 1983; SCANS 1991, 1992, 1993, n.d.; and Young 1986)

This well-supported finding applies to employers in large, medium, and small companies, public and private; reflects the views of workers holding different management positions within the companies surveyed; and holds true regardless of the nature of the work in which the company is engaged. The Committee for Economic Development researchers write:

Basic Skills	Higher-Order Thinking Skills	Affective Skills and Traits
Oral communications (speaking, listening)	Problem solving	Dependability/Responsibility
Reading, esp. understanding and following instructions	Learning skills, strategies	Positive attitude toward work
Basic arithmetic	Creative, innovative thinking	Conscientiousness, punctuality, efficiency
Writing	Decision making	Interpersonal skills, cooperation, working as a team member
		Self-confidence, positive self-image
		Adaptability, flexibility
		Enthusiasm, motivation
		Self-discipline, self-management
		Appropriate dress, grooming
		Honesty, integrity
		Ability to work without supervision

> The results of this survey confirm what has long been suspected of the business community: Specific occupational skills are less crucial for entry-level employment than a generally high level of literacy, responsible attitudes toward work, the ability to communicate well, and the ability to continue to learn (1985, p. 17).

In his summary of 14 studies on the needs expressed by employers for entry-level job qualifications, Natriello writes:

> The results of these studies suggest that: 1) employers place greatest importance on employee attitudes, 2) employers emphasize basic skills over job-specific skills, and 3) employers deem it important for workers to have an understanding of the work environment (1989, p. 1).

And Young, commenting on yet another research effort, says:

> The three studies...yielded remarkably consistent results on the question of those competencies most needed by employees. The three studies... emphasized the need for employees to have social skills, positive attitudes about work, and basic skills of communication....Specialized or highly technical skills were not stressed in the three studies but were, in fact, usually de-emphasized (1986, p. 246).

Employers find far too many entry-level job applicants deficient in employability skills, and want the public schools to place more emphasis on developing these skills. (Baxter and Young 1982; Beach 1982; Byrne, Constant, and Moore 1992; Charner 1988; Commission on Skills 1990; Committee for Economic Development 1985; Gregson 1992; Gregson and Bettis 1991; Kazis 1993; Packer 1992; Painter 1985; Poole 1985; Sherer and Eadie 1987; and Wentling 1987)

Valuing employability skills—to the point of assigning them an even higher priority than job-specific technical skills—employers are understandably distressed to find so many entry-level job applicants lacking these skills. Charner (1988) identified and catalogued the reasons given by employers for not hiring young people for entry-level jobs, including:

- Low grades and low levels of academic accomplishments
- Poor attitudes, lack of self-confidence
- Lack of goals, poorly motivated

- Lack of enthusiasm, lack of drive, little evidence of leadership potential
- Lack of preparation for the interview
- Excessive interest in security and benefits, unrealistic salary demands and expectations
- Inadequate preparation for type of work, inappropriate background
- Lack of extracurricular activities
- Inadequate basic skills (reading, writing, math) (p. 30).

Many employers focused specifically on the insufficiency of affective employability skills. The Commission on the Skills of the American Workforce researchers report:

> Our research did reveal a wide range of concerns covered under the blanket term of "skills." While businesses everywhere complained about the quality of their applicants, few talked about the kinds of skills acquired in school. The primary concern of more than 80 percent of employers was finding workers with a good work ethic and appropriate social behavior: reliable, a good attitude, a pleasant appearance, a good personality (p. 3).

One can easily see that employability skills are not merely attributes that employers *desire* in prospective employees; rather, many employers now *require* applicants to have these skills in order to be seriously considered for employment. And if employers hire applicants and then find them to lack these skills? Gregson and Bettis write:

> ...employers discharge, or fail to promote, most employees because of behaviors reflecting an inadequate work value or attitude rather than because of a deficiency in job skills or technical knowledge (1991, p. 2).

Herr and Johnson, after presenting a typical list of general employability or "work context" skills, note that, "Studies show that these are at the heart of work adjustment, job satisfaction, and work satisfaction; low levels are the core reasons that workers are discharged" (1989, p. 17).

And Beach (1982) cites research indicating that fully 87 percent of persons losing their jobs or failing to be promoted were found to have "improper work habits and attitudes rather than insufficient job skills or knowledge" (1982, p. 69).

Employers expect to train new employees in company-specific procedures and to acquaint them with the behavioral norms, standards, and expectations of their workplace. They often provide training in job-specific technical skills as well. But they are emphatic in their conviction that the schools should take most of the responsibility for equipping young people with general employability skills.

Following their review of over 100 studies undertaken to identify the characteristics and skills desired by contemporary employers, Sherer and Eadie conclude, "It is very important...that the schools provide the basic employability skills so that all students and adults are equipped to handle the complexities of their jobs throughout their lives" (1987, p. 16). Focusing on a specific vocational area, Lundy's (1984) research leads to a reminder about the school's role:

> Industrial education teachers in the secondary schools must not forget that there is a great need for preparing young people in their respective classes with good work habits. Students need to be taught such things as honesty, punctuality, regular attendance, productivity, and conscientiousness (p. 23).

Be that as it may, many researchers, as previously noted, have found that "employers do not think that the schools are doing a good job of developing these much-needed abilities" (Committee for Economic Development 1985, p. 17).

The demand for basic, higher-order, and affective employability skills reflects profound changes in the American workplace. (Bailey 1990; Berryman 1988, 1989; Busse 1992; Committee for Economic Development 1985; Lankard 1990; Packer 1992; SCANS 1991)

"The World Has Changed," write authors of the 1991 SCANS report, as they address the evolution of the American workplace and its requirements. Making reference to the days when "a strong back, the willingness to work, and a high school diploma were all that was needed to make a start" (p.1), Commission members contrast this with the "high performance workplace" that is becoming more and more common.

Instead of work that is "routinized, repetitive, and organized along hierarchical lines," this modern workplace requires different kinds of tasks, approaches, and employees:

> In this new environment, work is problem-oriented, flexible, and organized in teams; labor is not a cost but an investment. Most important, the high-performance organization recognizes that producing a defective product costs more than producing a high-quality one. The solution: design quality into the product development process itself, particularly by enabling workers to make on-the-spot decisions (pp. 3-4).

As Busse (1992) and many others observe, changes in the American workplace have been inspired to a great extent by foreign—and particularly Japanese—competition. In today's "global marketplace," many U.S. business and industry leaders have realized that remaining internationally competitive requires structuring the work environment in ways patterned on the approaches taken by foreign competitors—the use of "quality circles," for example, and lines of communication which allow workers to speak directly with upper management representatives.* Describing companies that have modeled themselves after foreign competitors, Packer (1992) observes:

> These businesses use all of their workers' skills to relentlessly pursue excellence, product quality, and customer satisfaction. They combine technology and people in new ways, moving decisions closer to the front lines, and drawing more fully on the abilities of all workers (p. 29).

The advent of sophisticated technology itself has revolutionized the workplace and its skill requirements. For one thing, many kinds of routinized, repetitive work have been completely eliminated (Lankard 1990). For another, the factory employees and office workers of today must be able to perform increasingly more sophisticated operations, such as operating computers and analyzing data (Bailey 1990; Berryman 1988, 1989; Busse 1992). Identifying the skills employees need in order to be equal to these demands, Lankard's comments are typical of the workplace research:

> Entry-level workers need to be able to operate independently, using problem-solving and decision-making skills. The need for worker collaboration and teamwork requires employees to be creative, flexible, and possess good interpersonal and managerial skills (p. 1).

The reference to interpersonal skills points to yet another reason for the changes in employability skill needs of today's workplace: the increasingly multicultural nature of the workforce. The U.S. Department of Labor projects that by the year 2000, three-quarters of workers will be women and/or minorities and/or immigrants. "Good interpersonal skills," writes Lankard, "are more in demand the more multicultural the workforce becomes."

Failure to equip young people with employability skills has far-reaching consequences. (Bhaerman and Spill 1988; Byrne, Constant, and Moore 1992; Commission on Skills 1990; Kazix and Barton 1993; Rosove 1982; Wenting 1987)

A final reason for the increased interest in equipping young people with basic, higher-order, and affective skills is the growing awareness of what happens when great numbers of people lack these qualifications. "America may have the worst school-to-work transition system of any advanced industrial country" (p. 4), write the Commission on the Skills of the American Workforce researchers, commenting on our nation's failure to provide young people a solid foundation of employability skills. Following are the words of other observers regarding this failure and its consequences:

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* A subset of the literature on employability skill development and school-to-work transitions is the literature detailing the education and training systems of other countries and the ways these contrast with the American approach. While this topic is outside the scope of the present summary, some researchers whose work is referenced in this report drew upon their knowledge of foreign systems to design studies or make recommendations.

- We must remember that employment and employability are not the same thing. Being employed means having a job. For a youth or adult who is not adequately prepared, having a job is likely to be a temporary condition. Being employable means possessing qualities needed to maintain employment and progress in the workplace (Bhaerman and Spill 1988, pp. 42-43).

- For most of our young people, the United States has a more or less do-it-yourself system for making the transition from school to work....what they learned in school is not adequately related to what they need to know to succeed after leaving school (Byrne, Constant, and Moore 1992, p. 23).

- The socioeconomically disadvantaged young—whether white, black, Hispanic, male or female—face almost impenetrable employability barriers (Wentling 1987, p. 353).

- The employment picture for black and Hispanic young Americans who do not continue to college is horrible—and it worsened in the 1980s...According to 1990 data, only 29 percent of black high school dropouts between the ages of 16 and 24 are working at any job...and only a little more than half of all black youths with high school diplomas are employed (Kazis and Barton 1993, p. 3).

- Roughly one-third of all high school graduates, and somewhat more high school dropouts, fail to find stable employment by the time they are thirty...For this group, the rather casual American system does not work well (Economist Paul Osterman, quoted in Kazis and Barton 1993).

- Work-related failure or even unsatisfactory work experience can have serious negative repercussions for the well-being of those unfortunate enough to experience it (Rosove 1982, p. 114).

Some writers have gone on to argue that providing young people with qualifications for employability is, among other things, an ethical responsibility. "This is not just an economic issue," write Bhaerman and Spill (1988); "it is one of equity and fairness." They continue:

> Think about employability skill development as one of the civil rights issues....Those responsible for programs in this area have a moral obligation to provide the most complete education and training possible for students and clients (pp. 43-44).

In like fashion, Rosove (1982) writes:

> Work is of central importance to the well-being of people in our society. We take a large part of our identification from it and thus it forms a significant part of our self-concept....There is a strong ethical and practical imperative facing all of us who help prepare people for the labor market: to ensure that our clients or students are well-prepared to enter working situations (p. 114).

Research Findings II: Effective Practices

The research on the effectiveness of different approaches to teaching employability skills generally does not compare entire program structures to one another. That is, researchers do not typically compare the relative effectiveness of, say, cooperative work experience programs and school-based businesses in terms of their power to instill employability skills in their participants.

Recent employability skills research is no longer even concerned with comparing the effectiveness of school-based instruction and learning with that of workplace-based learning, since previous research has shown that both can be effective or ineffective, depending upon how they are structured and managed (Bhaerman and Spill 1988; Stasz, et al. 1993). Nor have researchers set up studies comparing the relative effectiveness of vocational programs and regular academic programs in terms of their ability to build students' employability skills. As noted in the RAND policy brief, "Teaching Generic Skills for the Workplace":

> If policymakers focus on the use of an effective instructional model, regardless of setting, they can leave open more options for improving instruction for all students in many different types of programs (1993, p. 1).

What contemporary researchers *have* concerned themselves with is identifying the *practices* in operation in successful programs, regardless of program type or setting. Having identified effective practices (and, for that matter, ineffective ones), they are then able to make research-based recommendations to program developers, supervisors, and teachers about elements to include in (or delete from) their instructional designs.

Some of the research is observational: Researchers may identify teachers whose students exhibit high levels of employability skills and teachers whose students are less equipped with these skills. Then they conduct observations of those teachers' classes, noting differences in instructional content, teaching approach, classroom design, etc.

Other studies are experimental: A control group of students receives no employability skills instruction, an experimental group hears a series of lectures on employability skills, and another experimental group is exposed to employability skills via an interactive, experiential approach. The acquisition of employability skills by students in the three groups (as determined by rating instrument, teacher judgment, workplace supervisor, or other means) is then compared.

Employability skills are best learned when they are included among instructional goals and explicitly taught. (Graham, Vitale, and Schenk 1991; Lankard 1990; Meyer and Newman 1988; VEW 1993; Spill and Tracy 1982; and Stasz, et al. 1990, 1993)

This assertion may seem obvious. However, there continue to be many vocational and "regular" program teachers and administrators who believe that students will pick up these skills and abilities incidentally in the course of growing up and being in the public schools. The research conducted with employers and reported above makes it clear that this is not the case.

Others believe that some capabilities—particularly critical and creative thinking and affective traits such as a positive attitude and a cooperative manner—are qualities that people either have or don't have. In other words, they do not see these qualities as teachable.

Research, however, shows that these **employability skills and traits are very amenable to being taught** (Buck and Barrick 1987; Carnevale, Gainer, and Meltzer 1988; Foster, Engels, and Wilson 1986; Greathouse 1986; Gregson 1992; Gregson and Bettis 1991; Gregson and Trawinski 1991; Herr and Johnson 1989; Meyer and Newman 1988; Stasz, et al. 1990, 1993; and Stone, et al. 1990). After discussing the "bad news" that employers find entry-level job applicants deficient in employability skills, Buck and Barrick state that "the good news is that employability skills can be taught, both directly and indirectly" (1987, p. 29), and proceed to offer research-based suggestions for imparting them to students. Following their analysis of employability skills research, Herr and Johnson conclude that:

> The skills related to general employability can be learned; therefore, all of them are appropriate and important targets for professional interventions (1989, p. 26).

In addition, researchers have found that employability skills are most likely to be taught and learned when acquisition of them is explicitly stated along with other program goals. For one thing, doing so keeps the attention of instructors focused on activities to build these skills. For another, it places employability skill development on the same level as academic and technical skills, thereby communicating to students that they are important and need to be learned.

Employability skills, then, can be taught and are important to teach. The findings that follow clarify how these skills can best be taught and learned.

Democratic instructional approaches are superior to indoctrinational approaches for imparting employability skills to students and workers. (Gregson 1992; Gregson and Bettis 1991; Gregson and Trawinski 1991; Stasz, et al. 1990, 1993)

One line of inquiry in the employability skills research compares "indoctrinational" and "democratic" instruction in terms of their effectiveness in developing students' work values and attitudes. Democratic approaches are said to:

> ...raise student consciousness about values, attitudes, and worker responsibilities....pedagogical strategies such as role playing/simulation, problem solving, and group discussion are democratic in nature because they encourage students to explore their attitudes and do not advocate one particular outcome (Gregson 1992, p. 63).

Indoctrinational instruction, meanwhile, is described as:

> ...a process by which students are given information in such a manner that they are discouraged or prevented from questioning its validity [and] includes pedagogical strategies that minimize student input (p. 63).

Lectures and the use of reward structures are among the strategies considered to be indoctrinational.

Comparison of teachers who are successful in inculcating affective employability skills in their students with those who are less successful or unsuccessful reveals that the successful teachers rely much more on democratic strategies and much less on indoctrinational ones.

Despite this finding, Gregson and his colleagues also found that "vocational education instructors frequently use indoctrinational pedagogical strategies to teach work values and attitudes" (Gregson and Trawinski 1991, p. 7) and that lecture, in particular, is "one of the most overused and misused pedagogical strategies [and has] not only...been criticized for being exploitative, but it has also been attacked for ineffectiveness" (Gregson 1992, p. 67).

In school settings, employability skills are best learned when classrooms replicate key features of real work settings and student tasks approximate those performed by workers in those settings.

(Berryman 1990, 1991; Graham, Vitale, and Schenk 1991; Gregson and Bettis 1991; Junge, Daniels, and Karmos 1984; Meyer and Newman 1988; VEW 1993; SCANS 1991; Spill and Tracy 1982; and Stasz, et al. 1990, 1993)

This finding validates what is already well known about teaching vocation-specific technical skills—that active, hands-on learning in actual or simulated work environments is far more effective than isolated, decontextualized learning. Yet, in her compilation of "mistakes we persistently make in education and training," Sue Berryman notes that:

> Too often knowledge and skills are taught in settings that do not reproduce the settings in which the work must be performed. This teaching out of context impedes the transfer of training to settings outside the training context (1990, p. 6).

Gregson and Bettis, focusing on affective skill development, found that, in successful classes, "instructors attempted to teach work values and attitudes in a context similar to what students would experience in the world of work" (1991, p. 19). Junge, Daniels, and Karmos (1984) make a similar point regarding the acquisition of work-applicable basic skills:

> Teaching is more than telling, and learning is more than acquiring and demonstrating mastery of facts. To ensure the transfer of basic skills into the workplace, teachers must engage students as active participants in the learning process. Prospective employers will expect them to be active participants in the workplace (p. 145).

The conclusions drawn by Stasz, et al. (1993) provide some clues as to why active and "situated" learning proves most effective:

> It appears that generic skills and work-related attitudes can best be taught in classrooms and programs that blur the traditional distinctions between learning in school and out of school.... This approach requires teachers to...create classrooms where students can acquire and apply knowledge and skills to real-world problems, learn to work with others in a community of

> learner-practitioners, and develop intrinsic motivation for learning and working (p. 56).

A key feature of classes that successfully teach employability skills is that instructors hold and communicate high expectations for the learning and behavior of their students—whether or not the overall culture of the school holds high expectations for them. (Lankard 1990; VEW 1993; and Stasz, et al. 1990, 1993)

The general educational research shows that holding and communicating high expectations for students' learning and deportment are critical features of effective schooling (Cotton 1989). Unfortunately, in some secondary school settings, vocational classes are treated as low-ability tracks and/or repositories for troublesome students. Since research also shows that low expectations are frequently communicated to students in lower tracks (Oakes 1986a, b), students in vocational programs are oftentimes given negative messages about their capacity to learn and conduct themselves appropriately.

Those teachers—in vocational and other programs—who do hold and communicate high expectations for their students generally find those students to be quite responsive. If, in creating a workplace-like learning environment, they communicate employer-like expectations for basic skill application, punctuality, dependability, thoroughness, decision-making capability, cooperation, and so on, students have opportunities to practice and perfect these skills and traits. This, in turn, enhances the desirable employability qualities of skill-related self-confidence and general self-esteem.

This pattern has been found consistently in high-expectation vocational classrooms, even within schools which, as a whole, do not hold high expectations for vocational students. Conversely, note Stasz, et al. (1993):

> When teachers do not hold high positive expectations for student performance and behavior, they do not design and conduct the kinds of rich and challenging classrooms that can foster the learning of generic skills and attitudes (p. xxii).

In classes that effectively teach employability skills, instructors assume the role of facilitators and coaches rather than lecturers and order givers, requiring students to take much of the responsibility for their own learning. (Graham, Vitale, and Schenk 1991; Gregson 1992; Nagle 1987; Spill and Tracy 1982; and Stasz, et al. 1990, 1993)

Closely related to the design of realistic learning settings and tasks is the practice effective teachers pursue of relating to their students the ways that supervisors in high-performance workplaces relate to those they supervise. With the instructor functioning as a guide and "expert practitioner," the student engages in group problem solving and decision making with others on his or her team while working on a group project, generating hypotheses, testing ideas, and deriving generalizations (Gregson 1992). In successful classes observed by the RAND researchers:

> Typically, teachers moved from group to group monitoring progress and offering limited assistance, instruction, or motivation, much as an "expert consultant" might, but less aggressively (1993, p. 2).

"All students," write Stasz, et al., "need to acquire not only knowledge and skills but also a positive perspective on learning that includes their own responsibility for it" (1993, p. 56).

In another kind of learning activity, students may be given certain situational factors which might be present in a workplace setting, and then, with input and guidance from the instructor, engage in role-playing to resolve the situation or make recommendations regarding it. These simulations, notes Gregson (1992):

> ...have been shown to be effective in developing good work attitudes and work habits in students...even those students who observe role-playing sometimes experience attitude changes or confirmations (p. 66).

Meanwhile, "lecturing and didactic instruction [are] minimized" (Stasz 1990, p. 52). A demonstrably ineffective approach, lecture "does not have the motivational power that role playing does" (Gregson 1992, p. 67).

In classes whose participants acquire a high level of employability skills, learning is individualized—determined by students' learning needs and styles—rather than being regulated by textbooks or rigid lesson plans. (Greathouse 1986; Spill and Tracy 1982; Stasz, et al. 1990, 1993; VEW 1993)

Studies reveal that the instructional content and strategies observed in the classrooms of successful teachers are not textbook- or schedule-driven; rather, they are provided in response to each unique situation and are based on teachers' understanding of the ways their different students take in and process information. As is often the case in actual work settings, students acquire skills on an as-needed basis. Commenting on the instructional style of effective teachers, the RAND policy brief notes that:

> Instruction was offered opportunistically, in response to immediate and specific student needs...The teachers asked students to articulate their learning, i.e., to verbalize their perceptions or conclusions about their own performance (1993, p. 2).

Teachers are most successful when they have considerable autonomy in establishing curriculum, classroom design, and instructional approach. (Spill and Tracy 1982; and Stasz, et al. 1990, 1993)

The research on professional teaching conditions reveals an interesting irony: The autonomy and freedom to innovate that characterized the approach of successful teachers was often due to a kind of benign neglect of vocational classes from the administration of their schools. For example:

> Autonomy appeared to contribute to the instructor's ability to design classrooms that worked....vocational teachers were given more autonomy because the administration considered them outside the school mainstream (RAND 1993, p. 2).

The researchers who identified these circumstances (Stasz, et al. 1993) elaborate on this point:

> This freedom to innovate...was more a by-product of other school policies than a belief that teacher autonomy would lead to improved instruction. [Many of the successful teachers'] courses were not prerequisites for any others.... School administrators paid little attention to these vocational classes... The policies that influence autonomy have to do with course prerequisite requirements, graduation requirements, and credit standards set by the state college and university system. If teachers don't teach college-prep courses, these policies don't constrain what they teach and how they teach it (p. 125).

These researchers advocate that teachers in general should be consciously and deliberately given autonomy to structure their classes in ways that support the acquisition of employability skills.

Recommendations

Based on the research they have conducted and analyzed, many of the researchers went on to offer recommendations for increasing students' and workers' acquisition of employability skills. These are itemized below, listed by the groups to whom the recommendations are made. They are drawn from: Berryman 1988, 1989; Bhaerman and Spill 1988; Greathouse 1986; Kazis and Barton 1993; Lankard 1990; Neal 1983; SCANS 1992; Spill and Tracy 1992; Stasz, et al. 1990, 1993; VEW 1993; and Wentling 1987b.

Federal and State Policymakers:

1. Establish as a top-priority national goal that every student should complete high school possessing sufficient employability skills to earn a decent living.

2. Require that all federally funded vocational preparation programs include components for teaching employability skills.

3. Encourage and support continued experimentation with and learning from diverse programs linking schools, employers, and young people.

4. Direct federal resources toward: (a) increasing teachers' capacity to teach employability skills, and (b) engaging participation of the private sector in providing learning opportunities for students at worksites.

5. Establish a national assessment system that will permit educational institutions to certify the levels of employability competencies their students have achieved.

District and School Administrators:

1. Establish programs which are long-term and in-depth, beginning with career awareness activities in elementary school.

2. Include the development of employability skills among the explicitly stated district- and school-level goals.

3. Structure programs in keeping with local needs—e.g., programs should reflect the kinds of employers in the community and local preferences for kinds of employer-school interaction.

4. Extend teachers considerable latitude for structuring their curriculum, classroom design, and instructional approaches.

5. Provide teachers support, including setting up summer internships, offering common preparation periods to plan interdisciplinary projects, and hiring teachers for planning/professional development over the summer. "Of all the resources required for reinventing schools around the SCANS ends [a typical set of employability skills], none are more important than those devoted to teacher training and staff development" (SCANS 1992, p. 9).

6. Encourage the use of performance assessments and the information they provide to develop student "employability profiles" that students can share with prospective employers.

Teachers:

1. Arrange the classroom in such a way that it replicates key features of actual work settings and assign students tasks similar to those performed by workers in those settings.

2. Reinforce to students that employers value basic, higher-order, and affective employability skills highly—even more highly than job-specific technical skills.

3. Communicate to students that they have the ability to perform tasks successfully and that they are expected to do so; provide monitoring and encouragement to help them achieve success.

4. Demand good deportment in the classroom. This conveys high expectations and familiarizes students with workplace norms.

5. Express work values through classroom instruction. Model attention to quality, thoroughness, and a positive attitude.

6. Utilize democratic instructional strategies such as role playing/simulation, problem-solving exercises, and group discussion with students; keep the use of lectures and reward structures to a minimum.

7. Monitor and support students' work as a consultant or master craftsman would, relating to them as intelligent, promising employees and providing them guidance and feedback.

8. Adapt instructional strategies to the tasks being taught and to the students performing them; do not hold rigidly to texts or syllabi.

9. Individualize instruction as much as possible, making use of a range of materials in different media in response to students' differing learning styles.

10. Reach agreements with supervisors at learning sites so that the importance of employability skill development will be emphasized at both school and workplace.

11. Help students to build employability "profiles" or "portfolios" that provide a more accurate picture of the students' command of the skills and traits employers value.

12. Participate in professional development activities and/or enroll in classes that emphasize methods to teach employability skills.

Employers:

1. Take steps to establish the standards of quality and high performance that now characterize our most competitive companies.
2. Develop internal training programs to equip present employees with the full range of basic, higher-order, and affective employability skills.
3. Continue to communicate to the schools the critical importance of instilling employability skills in students.
4. Collaborate with local schools to provide learning experiences that will foster students' development of employability skills.

In addition to its critical role in the U. S. economy, preparedness in employability skills is also an important contributor to the individual's self-regard and general well-being. Giving greater attention to this developmental area can therefore be expected to contribute to both social betterment and personal fulfillment. As Bhaerman and Spill (1988, p. 44) conclude:

> When carefully structured and thoughtfully conceived, employability skill development enables all individuals—young and old—to develop needed self-confidence and motivation, to meet successfully the challenges of work, to survive, and—most important—to flourish.

Key References

Bailey, T. "Jobs of the Future and the Skills They Will Require: New Thinking on an Old Debate." *American Educator* 14/1 (1990): 10-15; 40-44.

Presents finding from several case studies undertaken to investigate the effects of technological advances in manufacturing and service industries on the skill requirements of jobs in those industries. In sharp contrast to previous predictions, contemporary research reveals that advances in technology *increase* the need for workers with strong technical skills, initiative, problem-solving and decision-making skills, and teamwork capabilities.

Baxter, M. B., and Young, J. L. "What Do Employers Expect From High School Graduates?" *NASSP Bulletin* 66/458 (1982): 93-98.

Reports the results of a survey of manufacturing, service, public, wholesale, and retail employers to determine what skills and attitudes are of greatest importance on the job, which skills and attitudes require more emphasis in the schools, and how they determine whether workers possess desired skills and attitudes.

Beach, D. P. "A Training Program to Improve Work Habits, Attitudes, and Values." *Journal of Epsilon Pi Tau* 8/2 (1982): 69-74.

Cites research on the employability skills desired by employers. Describes development and piloting of a training program, the Affective Competency Workshops, intended to help employees identify employability skill areas in need of improvement and to address these systematically. Evaluations of the pilot effort were positive.

Berryman, S. E. *Designing Effective Learning Environments: Cognitive Apprenticeship Models*. New York, NY: Columbia University, Institute on Education and the Economy, September 1991. (ED 337 689)

Identifies several incorrect assumptions about the ways that learning takes place—assumptions on which many instructional programs for students and adults are based. Offers findings from cognitive science describing the ways people in fact learn, and identifies ways that these concepts can be used to design more effective learning environments.

Berryman, S. E. *Education and the Economy: A Diagnostic Review and Implications for the Federal Role*. New York, NY: Columbia University, Institute on Education and the Economy, July 1988. (ED 314 530)

Reports findings from case studies of various industries and discusses the implications of these findings for the educational system. Includes a series of recommendations for actions to be taken by the federal government to improve the educational system's preparation of people for employment.

Berryman, S. E. *When American Businesses Change: The Imperatives for Skill Formation*. NCCE Occasional Paper No. 9. New York, NY: National Center on Education and Employment, May 1990. (ED 347 215)

Presents research-based recommendations to businesses regarding how they can improve the processes and outcomes of training programs. Identifies common practices in education and training that are ineffective and proposes approaches that can improve the way that training is provided and assessed.

Busse, R. "The New Basics: Today's Employers Want the 'Three R's' and So Much More." *Vocational Education Journal* 67/5 (1992): 24-25, 47.

Identifies skills beyond the "3 R's" that business and industry leaders require on the part of prospective employees. Discusses the influence of foreign—and particularly Japanese—companies on the increased value that U.S. business leaders now place on these generic employability skills.

Carnevale, A. P.; Gainer, L. J.; and Meltzer, A. S. *Workplace Basics: The Skills Employers Want*. Alexandria, VA: American Society for Training and Development; Washington, DC: U.S. Bureau of Labor, Employment and Training Administration, 1988.

Summarizes research on basic workplace skills, including changing demographics, technological developments, current needs of employers, skill deficits in the workforce, generic employability skills, and education/training practices shown by research to foster employability skills.

Commission on the Skills of the American Workforce. *America's Choice: High Skills or Low Wages!* Executive Summary. Rochester, NY: National Center on Education and the Economy, June 1990.

Discusses the problem of low productivity in the American economy, skill needs of prospective employees as expressed by business and industry representatives, and recommendations for improving skills and school-to-work transitions of American students.

Committee for Economic Development, Research and Policy Committee. *Investing in Our Children: Business and the Public Schools*. New York: Committee for Economic Development, 1985.

Outlines a school reform strategy designed to increase the capacity of American young people to acquire and hold good jobs and contribute to the U.S. economy. Calls for in-depth and sustained involvement of the business community, labor, civic leaders, parents, educators, and school boards in working together to improve the quality of U.S. education.

Foster, D. E.; Engels, D. W.; and Wilson, M. J. "Knowledge Acquired in a Program for Building Employability Skills." *Journal of Employment Counseling* 23/4 (1986): 176-177.

Compares the employability scores of secondary students who participated in an employability skills course with those who did not. The Employability Inventory scores of experimental girls were higher than those of control girls and significantly higher for experimental boys than control boys.

Gregson, J. A. "Effective Pedagogical Strategies for Work Attitudes Instruction." *Journal of Industrial Teacher Education* 29/3 (1992): 60-79.

Cites research findings about various indoctrinational and democratic instructional approaches used in vocational education courses and in work settings to instill in workers the kinds of work-related attitudes and behaviors desired by employers. Concludes that democratic approaches are more effective than indoctrinational ones.

Gregson, J. A., and Bettis, P. J. *Secondary Trade and Industrial Education Work Values Instruction: Emancipatory or Indoctrinational?* Paper presented at the American Vocational Association Convention, Los Angeles, CA, December 1991. (ED 341 781)

Conducted interviews with 50 trade and industrial education instructors identified as effective in inculcating positive work values and attitudes to determine what pedagogical methods they used with their students. The successful instructors used more democratic methods than indoctrinational ones, but students were not encouraged to analyze or question the pyramidal structure of most workplaces.

Gregson, J. A., and Trawinski, S. C. *The Impact of Designed Democratic Pedagogy on Trade and Industrial Students' Work Values and Attitudes.* Paper presented at the American Vocational Association Convention, Los Angeles, CA, December 1991. (ED 341 780)

Reports the results of a study of the relative effectiveness of democratic and indoctrinational approaches for fostering generic employability skills and attitudes in students enrolled in trade and industrial education programs. Confirms findings from the literature review, namely that democratic instructional strategies are superior to indoctrinational ones.

Junge, D. A.; Daniels, M. H.; and Karmos, J. S. "Personnel Managers' Perceptions of Requisite Basic Skills." *The Vocational Guidance Quarterly* 33/2 (1984): 138-146.

Presents the results of a survey of personnel officers in large companies with corporate offices in the state of Illinois to determine the skills needed by entry-level workers and the relative importance of those skills. Both specific content knowledge and work-related attitudes were cited.

Lankard, B. A. *Employability—The Fifth Basic Skill.* ERIC Digest No. 104. Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education, 1990. (ED 325 659)

Summarizes research on the generic employability skills employers desire in job applicants in addition to basic and job-specific skills. Cites approaches indicated by research as effective in fostering the development of these skills in secondary students.

Lundy, L. L. "Teach More Than Skills and Knowledge." *Industrial Education* 73/1 (1984): 22-23.

Offers results from a survey of 215 companies in the state of Wyoming undertaken to determine what sorts of generic knowledge, work habits and personal attributes industrial employers want their workers to possess. Qualities are rank ordered according to how many times they were cited by those surveyed.

Meyer, E. C., and Newman, D. "Effects of a Commercial Self-Improvement Program on the Work Adjustment Skills of Cooperative Marketing Education Students." *Journal of Vocational Education Research* 13/2 (1988): 35-51.

Compares the effects of a cognitively oriented program and an experiential program in terms of their effects on the development of "work adjustment skills"—self-concept, human relations skills, and work attitude—by secondary students in marketing education programs. Experiential program students exhibited significantly better human relations skills and work attitudes; there were no significant self-concept differences.

Nagle, R. A. "The Ideal Job Candidate of the 21st Century." *Journal of Career Planning and Employment* 47 (1987): 36-40.

Draws upon the work of futurist writers to describe the nature of the workplace of the 21st century and to identify the abilities and other qualities that an ideal worker of the future will need to have to be successful.

Natriello, G. *What Do Employers Want in Entry-Level Workers? An Assessment of the Evidence.* National Center for Education and Employment Occasional Paper No. 7. New York: Columbia University, 1989.

Reviews 14 studies on the needs expressed by business and industry employers regarding the qualifications necessary for new employees in entry-level jobs. Findings include that employees place the greatest importance on employee attitudes and place basic skills over job-specific skills.

Neal, W. G. "Nontechnical Behaviors and Attitudes for Employability of Students in Post-Secondary Cooperative Programs." *Journal of Cooperative Education* 20/1 (1983): 25-34.

Reports the results of a study intended to identify "nontechnical behaviors and attitudes for employability" which employers consider important for cooperative education students to possess. Findings comprise a typical list of employability attributes, with being on time and following instructions cited as the two most important attributes.

Packer, A. H. "Taking Action on the SCANS Report." *Educational Leadership* 49/6 (1992): 27-31.

Identifies the generic skills and competencies identified in the SCANS reports as basic to all employment and discusses the need for educators and business people to collaborate to assure that young people develop these skills.

Painter, C. M. "A Survey of Communications Skills Needed On-the-Job by Technical Students." *Journal of Studies in Technical Careers* 7/3 (1985): 153-160.

Reports the results of a literature review and a study concerning the kinds of communications skills needed by students in technical career preparation programs and contrasts these with findings about the types of communications skills these students are typically taught.

Poole, V. A. "Work Experience Programs Can Held Develop Human Relations Skills." *Business Education Forum* 39 (1985): 9-10.

Cites the human relations capabilities employers identify as the most important for prospective employees to have and argues that work experience programs are the best means of inculcating these capabilities in students.

RAND. "Teaching Generic Skills for the Workplace." *Education & Human Resources Program Policy Brief*, Issue No. 2, April 1993.

Presents the results of a study aimed at identifying the essential features of classes which were successful in imparting to students generic work skills and work-related attitudes. A more complete report of this research may be found in Stasz, et al. (1993), below.

"Researcher lists lessons for school-to-work transitions." *Vocational Education Weekly*, Monday, April 26, 1993, pp. 3-4.

Draws upon the research findings of the Manpower Demonstration Research Corporation to identify the features of school-to-work transition programs that have been successful at moving disadvantaged young people into productive postsecondary employment or additional education. Cites 10 key elements.

Secretary's Commission on Achieving Necessary Skills. *Learning A Living: A Blueprint for High Performance. Executive Summary.* A SCANS Report for America 2000. Washington, DC: U.S. Department of Labor, April 1992.

Restates findings from other SCANS investigations as a context for making recommendations for fundamental restructuring of education to equip students with skills for the employment market of the future.

Secretary's Commission on Achieving Necessary Skills. *Skills and Tasks for Jobs.* A SCANS Report for America 2000. Washington, DC: U.S. Department of Labor, no date.

Identifies the job-relevant skills identified by the SCANS group and gives examples of how they are applied in a variety of jobs. Also focuses on specific occupations and shows how each makes use of the SCANS skills. Provides suggestions for the use of the resource by people in different professional roles.

Secretary's Commission on Achieving Necessary Skills. *Teaching the SCANS Competencies.* A SCANS Report for America 2000. Washington, DC: U.S. Department of Labor, 1993.

Offers educators ideas for teaching the SCANS competencies by providing examples of activities to use with students, organized by traditional curricular areas and by specific jobs. Describes real-world projects that have been undertaken to teach the SCANS skills. Includes sections on ESL students, computer literacy, and assessment.

Secretary's Commission on Achieving Necessary Skills. *What Work Requires of Schools.* A SCANS Report for America 2000. Washington, DC: U.S. Department of Labor, June 1991.

Identifies and discusses the ways that the workplace has changed in this century and introduces and describes the components that make up the SCANS "Workplace Know-How." Describes five scenarios—from the manufacturing, health services, retail trade, accommodations and food services, and office services sectors of the economy—to illustrate how this know-how is applied in actual work situations. Offers recommendations.

Sherer, M., and Eadie, R. "Employability Skills: Key to Success." *Thrust* 17/2 (1987): 16-17.

Discusses the concept of employability skills and draws from findings of over 100 studies to identify the characteristics and skills employers in virtually every field want employees and prospective employees to possess. Skills and abilities are cited within the general categories of basic skills, pre-employment skills, and work maturity traits.

Spill, R., and Tracy, M. *Work Maturity Programming for Youth under JTPA.* Washington, DC: National Alliance of Business, Inc., 1982. (ED 306 447)

Discusses the need for equipping young people with work maturity skills, provides guidelines for assessment and measurement of these skills, and provides program descriptions of several Job Training Partnership Act (JTPA) programs which include work maturity skill development as a major program component.

Stasz, C.; Ramsey, K.; Eden, R.; DaVanzo, J.; Farris, H.; and Lewis, M. *Classrooms That Work: Teaching Generic Skills in Academic and Vocational Settings.* Santa Monica, CA: RAND, 1993.

Builds on findings from a previous research effort (see Stasz, et al. 1990) to study academic and vocational classrooms in which teachers successfully imparted generic employability skills to secondary students. Offers a model for designing classroom instruction based on findings.

Stasz, C.; McArthur, D.; Lewis, M.; and Ramsey, K. *Teaching and Learning Generic Skills for the Workplace.* Santa Monica, CA: RAND, 1990.

Investigates the instructional and classroom management practices of four successful vocational educators to determine what kinds of generic employability skills they seek to teach and how these skills are imparted to students. Classroom observation, surveys, and interviews were used to gather information.

Stemmer, P.; Brown, B.; and Smith, C. "The Employability Skills Portfolio." *Educational Leadership* 49/6 (1992): 32-35.

Describes a large-scale effort undertaken in 22 Michigan school districts to plan and implement systems in which students make use of portfolios of their accomplishments in acquiring and demonstrating employability skills.

Stevenson, B., and Bowers, E. *Qualities Employers Seek in Employees.* Columbus, OH: Ohio State Advisory Council for Vocational Education, 1986. (ED 277 827)

Offers findings and recommendations emerging from a study of representatives of 60 Ohio companies regarding the qualities they seek in applicants for entry-level skilled and semi-skilled positions. Concludes with recommendations for vocational program improvement.

Stone, J. R., III; Stern, D.; Hopkins, C.; and McMillion, R. "Adolescents' Perceptions of Their Work: School Supervised and Non-School Supervised." *Journal of Vocational Education Research* 15/2 (1990): 31-53.

Compares the attitudes of employed secondary students in school-supervised programs with those in non-school-supervised programs. Compared to the students with non-school-supervised jobs, those with school-supervised jobs exhibited greater career and social maturity, greater work autonomy, more learning, less negative impact on school grades, and greater understanding of the relationship between school and work.

Van Shelhamer, C., and Bishop, D. *Personal Characteristics Which Make People More Employable in Agribusiness*. Bozeman, MT: Department of Agricultural and Industrial Education, Montana State University, 1984. (ED 253 725)

Reports the results of a study designed to determine the skills and characteristics agribusiness employers in Montana desire in entry-level employees. Recommendations to providers of agribusiness education providers follow study findings.

Wentling, R. M. "Employability Skills: The Role of Business Education." *Journal of Education for Business* 62/7 (1987): 313-317.

Presents essentially the same findings and recommendations as identified in Wentling 1987b, following.

Wentling, R. M. "Teaching Employability Skills in Vocational Education." *Journal of Studies in Technical Careers* 9/4 (1987): 351-360.

Presents research-based information on employability skills—what they are, who needs them, where and how they should be taught, and what vocational educators can do to insure that their students learn employability skills as well as specific technical course content.

Young, J. L. "What Competencies Do Employees Really Need?—A Review of Three Studies." *Journal of Career Development* 12/3 (1986): 240-249.

Discusses and synthesizes the results of two state-level surveys and one national survey undertaken to identify and rank the competencies that employers regard as most important for prospective employees to possess. As with many other investigations, dependability—coming to work reliably and on time—ranked first.

General References

Berryman, S. E. "Economic Change: The Implications for Student Learning." *NASSP Bulletin* 73/514 (1989): 59-70.

Identifies recent changes in the U.S. economy that have led business and industry to require a broader and more sophisticated range of skills on the part of their current and prospective employees. Identifies education and training needs which must be met if students and workers are to possess these skills.

Berryman, S. E.; Flaxman, E.; and Inger, M. "Integrating Academic and Vocational Education: An Equitable Way to Prepare Middle Level Students for the Future." *ERIC Clearinghouse on Urban Education Digest* 83 (November 1992).

Calls for the integration of academic and vocational education as a means to increase equity in the educational opportunities offered to students of different socio-economic levels, races, national origins, etc. Recommends a variety of steps schools and districts can take to achieve integration of these traditionally separate approaches to learning.

Bhaerman, R., and Spill, R. "A Dialogue on Employability Skills: How Can They Be Taught?" *Journal of Career Development* 15/1 (1988): 41-52.

Presents the research- and experience-based views of two experts in the vocational education field, including convictions about what constitute employability skills,

what practices are most effective in developing these skills in students and employees, and what kinds of assessments enable teachers and employers to know whether and to what degree students possess employability skills.

Buchanan, J. *Alaska's Youth: Ready for Work, A Call to Action*. Anchorage, AK: Alaska's Youth: Ready for Work, November 1990.

Presents findings about the work readiness of Alaska's high school graduates, as determined by CEO's representing 20 percent of Alaska's workforce. Needs were identified and presented along with the RFW's recommendations and plans to address those needs.

Buck, L. L., and Barrick, R. K. "They're Trained, But Are They Employable?" *Vocational Education Journal* 62/5 (1987): 29-31.

Discusses the importance of entry-level workers having employability skills as well as technical competence, and provides suggestions for helping students in vocational programs to address areas of weakness in their employability skills.

Byrne, S. M.; Constant, A.; and Moore, G. "Making Transitions from School to Work." *Educational Leadership* 49/6 (1992): 23-26.

Indicts the "more or less do-it-yourself system for making the transition from school to work" prevalent in the U.S., contrasts this haphazard approach with the systematic approach taken in other countries, and identifies components of the "overall systemic change" advocated by the authors.

Charner, I. "Employability Credentials: A Key to Successful Youth Transition to Work." *Journal of Career Development* 15/1 (1988): 30-40.

Explains the concept of employability credentials—documentation of a young person's development of employability skills—and discusses the Career Passport program, a specific approach to documenting and displaying the employability skills students have acquired.

Cotton, K. *Expectations and Student Outcomes*. Research Close-Up #7. Portland, OR: Northwest Regional Educational Laboratory, 1989.

Reviews research on the effects of teacher and schoolwide expectations on the achievement and attitudes of students. A major finding: communicating high expectations promotes achievement and positive attitudes of all students.

Gold, L. N. *States and Communities on the Move: Policy Initiatives to Create a World-Class Workforce*. Washington, DC: William T. Grant Foundation Commission on Work, Family and Citizenship, et al., 1991.

Summarizes recent publications which have identified needs and problems in America's workforce and then identifies and briefly describes programs designed to improve students' educational preparation and school-to-work transitions.

Graham, S. A.; Vitale, E.; and Schenck, M. L. "Developing Methodologies to Integrate Content and Behavioral Skills: A Pragmatic Approach to Curriculum Design." *Community / Junior College Quarterly of Research and Practice* 15/3 (1991): 285-293.

Describes the process and outcomes of developing and implementing a program in which job-specific technical skills instruction was combined with work-related skills and attitudes, including communication, organization, and interpersonal relations. Presents a six-step program development model.

Greathouse, L. "More Than Technical Skills Needed for Career Success." *Business Education Forum* 41/2 (1986): 9-11.

Identifies the personal attributes that employers want potential information processing employees to have in addition to technical skills and makes recommendations of teaching strategies that can be used to develop these attributes in students.

Harris, T., and Sweet, G. "Why We Believe in Vocational Student Organizations." *VocEd* 56/6 (1981): 32-35.

Identifies and describes 13 areas of knowledge and skill, beyond the technical skills associated with specific occupations, that are developed in students who become participants in vocational student organizations (VSOs).

Herr, E. L., and Johnson, E. "General Employability Skills for Youths and Adults: Goals for Guidance and Counseling Programs." *Guidance & Counseling* 4 (1989): 15-29.

Draws from research which has identified employability skills within the three categories of general, occupational, and firm-specific, and discusses activities that can be undertaken by guidance and counseling personnel to help students develop general employability skills.

Kantner, E. *Vocational Education Student Organizations. Five Star Approach to Excellence*. Westerville, OH: Ohio State Council on Vocational Education, 1985. (ED 289 075)

Presents the results of a study which (1) gathered interview data from several groups associated with Vocational Student Organizations in the state of Ohio regarding the effectiveness of VSOs in enhancing students' technical and personal work-related skills, and (2) surveyed teacher/advisers of exemplary programs to determine what they did to promote VSO success. Conclusions and recommendations follow study data.

Kazis, R., and Barton, P. E. *Improving the Transition From School to Work in the United States*. Washington, DC: American Youth Policy Forum, Competitiveness Policy Council, and Jobs for the Future, 1993.

Criticizes the haphazard manner in which school-to-work transitions occur in the U.S., and contrasts this with the efficient and systematic transition systems in Japan and several Eurpoean countries. Identifies promising practices and makes recommendations for federal initiatives.

Oakes, J. "Keeping Track, Part 1: The Policy and Practice of Curriculum Inequality." *Phi Delta Kappan* 68/1 (1986): 12-17.

Discusses the widespread use of tracking and its negative effects on poor and minority students, as well as demonstrating that tracking interferes with both educational excellence and equity.

Oakes, J. "Keeping Track, Part 2: Curriculum Inequality and School Reform." *Phi Delta Kappan* 68/2 (1986): 148-154.

Continues the discussion of tracking in American schools, including a focus on why tracking is so entrenched and approaches educators might take to change attitudes toward tracking and being to "de-track" schools.

Poole, V. *Classroom Activities in Employability Skills for Education for Employment*. Bulletin No. 9479. Madison, WI: Wisconsin State Department of Public Instruction, 1989. (ED 317 845)

Contains classroom activities intended to integrate employability skills into Wisconsin's K-12 curriculum. For each of nine skills, activities are provided for lower elementary, upper elementary, middle/junior high, and high school students. Employability skills curriculum content was derived from extensive research on skill needs and deficiencies of entry-level workers.

Randall, J. D. *Job Notes '91 Curriculum. A Career Development Unit Addressing Competency Statements from the National Career Development Guidelines*. Concord, NH: New Hampshire State Occupational Information Coordinating Committee, 1991. (ED 341 775)

Presents 15 lessons based on competency areas and indicators from the National Career Development Guidelines. Promotes skill development in areas determined to be of importance to employers as it addresses such topics as relating values to careers, relating skills to careers, interviewing skills, and job search strategies.

Rosove, B. "Employability Assessment: Its Importance and One Method of Doing It." *Journal of Employment Counseling* 19/3 (1982): 113-123.

Describes a programmed learning package called PLACE: Guided Steps to Employment Readiness, which is designed to provide measurable employability information and help users to assess their own employability and make improvements as needed.

Tannenberg, D. "Vocational Student Organizations Make a Difference." *VocEd* 59/7 (1984): 45-47.

Discusses, from the perspective of business, the benefits of student participation in vocational student organizations. Argues that leadership and communication skills, positive self-regard, and good attitudes are developed and enhanced by membership in these organizations.

Tomal, A. "Bring Performance Appraisals Into the Classroom." *Business Education Forum* 47/2 (1992): 17-19.

Discusses the generic employability skills that contemporary employers consider important, and offers business educators guidelines for developing and using performance appraisal instruments with their students in the classroom setting. Includes a prototype performance appraisal form.

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Close-Up #16

Integrated Curriculum

Kathy Lake

Introduction

> The integrated curriculum is a great gift to experienced teachers. It's like getting a new pair of lenses that make teaching a lot more exciting and help us look forward into the next century. It is helping students take control of their own learning.
> — M. Markus, media specialist, quoted in Shoemaker, September 1991, p. 797

> I'm learning more in this course, and I'm doing better than I used to do when social studies and English were taught separately.
> — Student, quoted in Oster 1993, p. 28

This teacher and student express an increasingly widespread enthusiasm for curriculum integration. While not necessarily a new way of looking at teaching, curriculum integration has received a great deal of attention in educational settings. Based both in research and teachers' own anecdotal records of success, educational journals are reporting many examples of teachers who link subject areas and provide meaningful learning experiences that develop skills and knowledge, while leading to an understanding of conceptual relationships.

Definitions

Integrated curriculum, interdisciplinary teaching, thematic teaching, synergistic teaching.... When attempting to define integrated curriculum, it is also necessary to look at related terms. Several definitions are offered here. As this paper is narrowed to K-12 integrated curriculum, definitions from vocational and higher education are not included, although there is a growing interest in both of those areas in the interdisciplinary, integrated curriculum. The reader interested in specifics about interdisciplinary work in those fields is invited to consult the General References at the end of this report.

A basic definition is offered by Humphreys (Humphreys, Post, and Ellis 1981) when he states, "An integrated study is one in which children broadly explore knowledge in various subjects related to certain aspects of their environment" (p. 11). He sees links among the humanities, communication arts, natural sciences, mathematics, social studies, music, and art. Skills and knowledge are developed and applied in more than one area of study. In keeping with this thematic definition, Shoemaker defines an integrated curriculum as

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> ...education that is organized in such a way that it cuts across subject-matter lines, bringing together various aspects of the curriculum into meaningful association to focus upon broad areas of study. It views learning and teaching in a holistic way and reflects the real world, which is interactive. (1989, p. 5)

Within this framework there are varied levels of integration, as illustrated by Palmer (1991, p. 59), who describes the following practices:

- Developing cross-curriculum subobjectives within a given curriculum guide
- Developing model lessons that include cross-curricular activities and assessments
- Developing enrichment or enhancement activities with a cross-curricular focus including suggestions for cross-curricular "contacts" following each objective
- Developing assessment activities that are cross-curricular in nature
- Including sample planning wheels in all curriculum guides.

Further description is provided by Glatthorn (1994, pp. 164-165).

Dressel's definition goes beyond the linking of subject areas to the creation of new models for understanding the world:

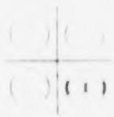
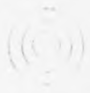
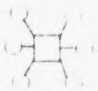
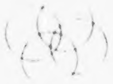
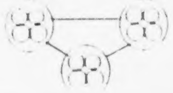
> In the integrative curriculum, the planned learning experiences not only provide the learners with a unified view of commonly held knowledge (by learning the models, systems, and structures of the culture) but also motivate and develop learners' power to perceive new relationships and thus to create new models, systems, and structures. (1958, pp. 3-25)

Another term that is often used synonymously with integrated curriculum is *interdisciplinary curriculum*. Interdisciplinary curriculum is defined in the *Dictionary of Education* as "a curriculum organization which cuts across subject-matter lines to focus upon comprehensive life problems or broad based areas of study that brings together the various segments of the curriculum into meaningful association" (Good 1973). The similarity between this definition and those of integrated curriculum is clear. Jacobs defines interdisciplinary as "a knowledge view and curricular approach that consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic, or experience" (1989, p. 8). This view is supported by Everett, who defines interdisciplinary curriculum as one that "combines several school subjects into one active project since that is how children encounter subjects in the real world—combined in one activity."

These definitions support the view that integrated curriculum is an educational approach that prepares children for lifelong learning. There is a strong belief among those who support curriculum integration that schools must look at education as a process for developing abilities required by life in the twenty-first century, rather than discrete, departmentalized subject matter. In general, all of the definitions of integrated curriculum or interdisciplinary curriculum include:

- A combination of subjects
- An emphasis on projects
- Sources that go beyond textbooks
- Relationships among concepts
- Thematic units as organizing principles
- Flexible schedules
- Flexible student groupings.

Several authors have gone beyond a single definition of curriculum integration to a continuum of integration. Fogarty has described ten levels of curricula integration (1991). The following chart summarizes some of her work. The reader who is interested in a more complete explanation is referred to Fogarty's book, *The Mindful School*.

Name	**Description**	**Advantages**	**Disadvantages**
Fragmented	Separate and distinct disciplines	Clear and discrete view of a discipline	Connections are not made clear for students; less transfer of learning
Connected 	Topics within a discipline are connected	Key concepts are connected, leading to the review, reconceptualization and assimilation of ideas within a discipline	Disciplines are not related; content focus remains within the discipline
Nested 	Social, thinking, and content skills are targeted within a subject area	Gives attention to several areas at once, leading to enriched and enhanced learning	Students may be confused and lose sight of the main concepts of the activity or lesson
Sequenced	Similar ideas are taught in concert, although subjects are separate	Facilitates transfer of learning across content areas	Requires ongoing collaboration and flexibility, as teachers have less autonomy in sequencing curricula
Shared	Team planning and/or teaching that involves two disciplines focuses on shared concepts, skills or attitudes	Shared instructional experiences; with two teachers on a team it is less difficult to collaborate	Requires time, flexibility, commitment and compromise
Webbed 	Thematic teaching, using a theme as a base for instruction in many disciplines	Motivating for students, helps students see connections between ideas	Theme must be carefully and thoughtfully selected to be meaningful, with relevant and rigorous content
Threaded	Thinking skills, social skills, multiple intelligences, and study skills are "threaded" throughout the disciplines	Students learn how they are learning, facilitating future transfer of learning	Disciplines remain separate
Integrated 	Priorities that overlap multiple disciplines are examined for common skills, concepts, and attitudes	Encourages students to see interconnectedness and interrelationships among disciplines, students are motivated as they see these connections	Requires interdepartmental teams with common planning and teaching time
Immersed	Learner integrates by viewing all learning through the perspective of one area of interest	Integration takes place within the learner	May narrow the focus of the learner
Networked 	Learner directs the integration process through selection of a network of experts and resources	Pro-active, with learner stimulated by new information, skills or concepts	Learner can be spread too thin, efforts become ineffective

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This work has been supported by others involved with the implementation of curriculum integration (Jacobs 1989; Shoemaker 1989). These differentiations may move from two teachers teaching the same topic but in their own separate classes (e.g., both English and history teachers teaching about the same period of history), to team design of thematic units, to interdisciplinary courses or thematic units, to a fully integrated curriculum, which is also referred to as synergistic teaching. Bonds, Cox, and Gantt-Bonds (1993) write:

> Synergistic teaching goes beyond the blurring of subject area lines to "a process of teaching whereby all the school subjects are related and taught in such a manner that they are almost inseparable. What is learned and applied in one area of the curriculum is related and used to reinforce, provide repetition, and expand the knowledge and skills learned in other curriculum areas. This process of synergistic teaching allows the student to quickly perceive the relationships between learning in all curriculum areas and its application throughout each of the school subjects.... Synergistic teaching does more than integrate; it presents content and skills in such a manner that nearly all learning takes on new dimensions, meaning, and relevance because a connection is discerned between skills and content that transcends curriculum lines. In a synergistic classroom, simultaneous teaching of concepts and skills without regard to curriculum areas would have a greater effect that the sum of learning skills and concepts in individual subject areas."

Background

> It is taken for granted, apparently, that in time students will see for themselves how things fit together. Unfortunately, the reality of the situation is that they tend to learn what we teach. If we teach connectedness and integration, they learn that. If we teach separation and discontinuity, that is what they learn. To suppose otherwise would be incongruous (Humphreys 1981, p. xi).

The subject of curriculum integration has been under discussion off and on for the last half-century, with a resurgence occurring over the past decade. The "explosion" of knowledge, the increase of state mandates related to myriad issues, fragmented teaching schedules, concerns about curriculum relevancy, and a lack of connections and relationships among disciplines have all been cited as reasons for a move towards an integrated curriculum (Jacobs 1989). Almost every teacher has experienced the feeling that "there just isn't enough time to get it all in" or "the school day just isn't long enough for all that I'm supposed to do; it seems that every year there are more things added to the curriculum." This feeling of frustration is one of the motivations behind development of an integrated curriculum. Teachers see this as part of the solution to the requirements that pull teachers in different ways.

These forces in contemporary schools are reinforced by Benjamin (1989, pp. 8-16), when he cites the trends towards global interdependence and the interconnectedness of complex systems, the increase in pace and complexity of the twenty-first century, the expanding body of knowledge, and the need for workers to have the ability to draw from many fields and solve problems that involve interrelated factors.

Each of these trends is relevant to the discussion of integrated curriculum, as schools move away from teaching isolated facts toward a more constructivist view of learning, which values in-depth knowledge of subjects. This view finds its basis in the work of Piaget, Dewey, Bruner, and others who hold a holistic view of learning. Each of these theorists is concerned with children having an understanding of concepts and underlying structures. Proponents of the progressive education movement of the 1930s advocated an integrated curriculum, sometimes identified as the "core curriculum" (Vars 1987). The movement towards integrated curriculum is a move away from memorization and recitation of isolated facts and figures to more meaningful concepts and the connections between concepts. The twenty-first century requirement for a flexible use of knowledge goes beyond a superficial understanding of multiple isolated events to insights developed by learning that is connected—or *integrated*.

Perkins advocates teaching for transfer and thoughtful learning when he states:

> A concern with connecting things up, with integrating ideas, within and across subject matters, and with elements of out-of-school life, inherently is a concern with understanding in a broader and a deeper sense. Accordingly there is a natural alliance between those making a special effort to teach for understanding and those making a special effort toward integrative education (1991, p.7).

This view supports the notion of curriculum integration as a way of making education more meaningful. Concerns about national achievement levels and high dropout rates have put the spotlight on any educational change that can lead to increased student success.

In addition to the realization that curriculum integration may be an effective element in making education both manageable and relevant, there is a body of research related to *how children learn* that supports curriculum integration. Cromwell (1989) looks at how the brain processes and organizes information. The brain organizes new knowledge on the basis of previous experiences and the meaning that has developed from those experiences. The brain processes many things at the same time, and holistic experiences are recalled quickly and easily. "The human brain," writes Shoemaker, "actively seeks patterns and searches for meaning through these patterns" (p. 13).

This research is supported by Caine and Caine (1991) when they connect neuro-psychology and educational methodologies and state that the search for meaning and patterns is a basic process in the human brain. In fact, the brain may resist learning fragmented facts that are presented in isolation. Learning is believed to occur faster and more thoroughly when it is presented in meaningful contexts, with an experiential component. Of course, every brain—every student—is unique. While the search for patterns and context may be universal, every learner will have his/her own learning style. To meet these diverse needs means providing choices for students.

Put to use in the classroom, the brain research points toward interdisciplinary learning, thematic teaching, experiential education, and teaching that is responsive to student learning styles. These finding are summarized by Shoemaker (1991, pp. 793-797).

The current movement toward an integrated curriculum, then, has its basis in learning theorists who advocate a constructivist view of learning. There is a body of brain research that supports the notion that learning is best accomplished when information is presented in meaningful, connected patterns. This includes interdisciplinary studies that link multiple curricular areas. There are many examples in the literature of such efforts by K-12 teachers, as well as those teachers involved in vocational education and higher education.

Another rationale for curriculum integration finds its basis in the commonsense wisdom of teachers, who are coping with an increased body of knowledge, large classes, and many mandates related to everything from drug awareness to AIDS to bus safety. When all of these requirements are added to the traditional body of knowledge for which teachers feel responsible, integration is seen as one way to meet both the needs of the students and the requirements of the state. The integration of curricular areas and concepts allows teachers to assist students as they prepare for the next century.

Finally, the movement toward a global economy and international connections, as well as the rapid changes in technology, are pushing education toward integration. The ability to make connections, to solve problems by looking at multiple perspectives, and to incorporate information from different fields, will be an essential ingredient for success in the future.

> An enduring argument for integration is that it represents a way to avoid the fragmented and irrelevant acquisition of isolated facts, transforming knowledge into personally useful tools for learning new information" (Lipson, et al. 1993, p. 252).

Nature of the Research Literature

The research related to curriculum integration is centered around three major categories, which overlap to some extent. The largest body of reports are descriptions of thematic units or other types of integrated curricula that the authors have actually used in their classrooms, or that an observer has documented. Most of these resources are listed in the General References section of this report. Most of these articles are grade specific and integrate two or three content areas. Some include actual lesson plans, while others are more descriptive. Some also include the teachers' perceptions of the effect of the integrated curriculum. Others include comparisons, either a comparison of two classes taught differently the same year or two classes taught in consecutive years.

The sources listed in the Key References section of this report fall into several categories. Fifty-three documents were reviewed for this report, many of which consider multiple aspects of curriculum integration. An initial look at the literature included eight resources that offer definitions of curriculum integration or interdisciplinary curriculum. These references include many variations on the term, including those that look at integration on a continuum. Definitions came from this writers' own observations, as well as from conversations with teachers and curriculum developers.

Three resources consider the issue of curriculum integration from a historical perspective, looking at the core curriculum movement and other educational innovations. This perspective tends to look at the middle or junior high school as a place where innovations were designed to meet the many needs of the young adolescent. Beyond a historical look at curriculum integration, eight articles discuss why this is an important part of education. These articles include those that cite brain research and its relation to learning, as well as those articles that describe current and future educational and societal conditions that require an integrated perspective.

Thirteen articles describe in part or whole the impact of an integrated curriculum on achievement and attitude. These articles span the grades, from primary through high school. Teachers' attitudes and perceptions are also considered in these references. The other area of research of great interest to teachers is the literature on how to establish an integrated curriculum. Ten resources present information about ways in which curriculum integration has effectively been put into practice.

Many resources describe examples from classrooms in which the curriculum has been integrated. Thirteen examples from elementary school were considered, along with eleven from middle or high school. These examples include those that looked at the curriculum as a whole and those that focused on specific areas, such as writing.

While not reviewed for this report, the reader may want to pursue the literature on curricular integration in vocational education and higher education. For that reason four references are included about vocational education and two are included that relate specifically to higher education.

Many of the articles are written by classroom teachers or by researchers who have spent time in a specific classroom. For this reason, there are a multitude of examples included in these references. While most are not spelled out in detail, they serve as a snapshot of what goes on in the classroom on a daily basis.

Research Findings

Research findings on the topic of curriculum integration fall into three majors divisions. There are a minority of research reports documenting comparison studies that were designed to determine the effectiveness of an integrated curriculum on content learning and attitude. There are also a large number of reports on how to implement an integrated curriculum successfully. These reports are frequently written by teachers or researchers who have been involved in programs they believe to be successful at enhancing learning. The largest body of information about curriculum integration describes teachers' experiences in the form of descriptions of thematic units they have taught or collaborations with other teachers. It is the conviction of these writers that an integrated curriculum meets the needs of their students, although they have not conducted a specific study to document this. The General References section of this paper includes citations of examples from elementary, secondary, and vocational school, as well as higher education.

Even those research reports that document the effect of an integrated curriculum, when compared with a more traditional, subject-bound curriculum, have involved small numbers of students. It is very difficult to determine all of the variables that come into play when looking at student achievement. For these reasons, the findings emerging from these studies should be regarded as provisional rather than definite conclusions based on research. It is necessary to keep in mind that a multitude of factors come into play when one considers the success or failure of a program, a class, a school year or a unit. Despite these difficulties, the data reported support the implementation of an integrated curriculum in both elementary and secondary schools.

EFFECT ON CONTENT KNOWLEDGE

Research reviewed for this report indicates no detrimental effects on learning when students are involved in an integrated curriculum. The areas of integration included: 1) art, mathematics, and reading; 2) writing across the curriculum; 3) history, science, and mathematics; 4) history and literature; 5) integrated humanities; 6) health and reading; 7) areas of mathematics; 8) social studies, health, and the arts; 9) physical education, the arts, health, and literature; and 10) science, social studies, health, and the arts (Aschbacher 1991; Edgerton 1990; Greene 1991; MacIver 1990; Shoemaker 1991; Vars 1965; Vye 1990; Williams 1991).

Vars (1965) summarized five major research studies and reported that in middle school programs that adhered to block time and core programs—both forerunners of the current integrated curriculum discussion—there was no loss of learning of subject matter and that, overall, students in the integrated programs did as well or better than students in separate-subject programs. The fact that teachers who plan and teach together have the same expectations across subject areas is a factor in the overall performance of the students.

The Humanitas program, an interdisciplinary, thematic, team-based approach to high school humanities in Los Angeles (Aschbacher 1991) has been compared to 16 other schools which are more traditional in their approach. Performance-based assessments; surveys of teachers, students, and administrators; classroom observations; teacher and student interviews; analysis of assignments and examinations; analysis of portfolios; records of student attendance; records of discipline incidents; and records of college-oriented behavior and standardized tests were all considered in this research, making it one of the most thorough explorations of curriculum integration.

The findings show that the Humanitas program has a statistically significant effect on writing and content knowledge, even after students have been enrolled for only one year. The largest gains were shown in conceptual understanding. The control groups of students made no gains in conceptual understanding during the same timeframe.

Students in the Humanitas program stay in school longer, work harder (by objective measures and their own report), and like school better. The expectations are higher in this interdisciplinary program, and the students are involved in more complex discussions that require them to make connections between content areas and the real world. These same expectations hold true for the students' written work, as students may be asked to write an essay that includes a discussion of the beliefs of more than one culture and the way those beliefs are influenced by cultural factors and values. The students are to include perspectives from art history, literature, and social institutions and make links to their own lives.

While the evaluation of the Humanitas project involved large numbers of students and a control group, there are also many smaller-scale studies reporting positive achievement outcomes for students who participate in an integrated curriculum. Levitan (1991) reports that a change from a literature-based language arts program to a science-literature-based program for sixth graders resulted in achievement increases for the majority of the students. Similar results are reported by Willett (1992) in a study of 87 fifth graders. Integrating the study of math with art resulted in higher posttest scores than those students who were taught mathematical concepts in isolation by the regular classroom teacher. "The data indicate that the integration of art activities into mathematics and reading can enhance the learning of specific concepts" (Levitan, 1991, p. 12). Similar results were reported by Friend (1984) in a study of mathematics and science integration with seventh grade students.

These findings seem very logical when one considers the work of Schmidt (1983), who found that in integrated language arts classrooms the amount of time spent in art and literature is more than double the amount of time spent on these subjects in classrooms where integration is not a priority.

EFFECT ON ATTITUDE

There is a small body of research related to the impact of an integrated curriculum on student attitudes. MacIver (1990) found that integrated program students developed team spirit and improved their attitudes and work habits. This was attributed, in part, to the fact that teachers met in teams and were able to quickly recognize and deal with a student's problem. Vars (1965) also reports that motivation for learning is increased when students work on "real" problems—a common element in integrated programs. When students are actively involved in planning their learning and in making choices, they are more motivated, reducing behavior problems. Jacobs (1989) also reports that an integrated curriculum is associated with better student self-direction, higher attendance, higher levels of homework completion, and better attitudes toward school. Students are engaged in their learning as they make connections across disciplines and with the world outside the classroom.

Students are not the only ones who respond favorably to the learning experiences that are part of an integrated curriculum. In a study of an integrated mathematics curriculum, Edgerton (1990) found that after one year 83 percent of the teachers involved preferred to continue with the integrated program rather than return to the traditional curriculum. MacIver (1990) found that teachers appreciate the social support of working together and feel that they are able to teach more effectively when they integrate across subjects and courses. They discover new interests and teaching techniques that revitalize their teaching.

When teachers who participated in the Mid-California Science Improvement Program were interviewed by an independent evaluator, the findings indicated a dramatic increase in science instruction time and comfort with science teaching. The teachers involved in this program taught year-long themes, with a blend of science, language arts, social studies, mathematics, and fine arts. Improvements were noted in student attitudes, teacher attitudes, and student achievement. These findings were consistent for both gifted and "educationally disadvantaged" students (Greene 1991).

RESEARCH ON IMPLEMENTATION

The research findings related to implementation have several common elements. One factor that comes through loud and clear is that *curriculum integration takes time*. Common planning time is needed to allow teachers to select themes, explore resources, discuss student learning styles and needs, and coordinate teaching schedules. Broad strands, such as community, change, or systems have been found to be effective thematic organizers (Shoemaker 1991). Based on an extensive review of the literature and discussions with teachers, Shoemaker lists the following as essential components of an integrated curriculum:

- **Core skills and processes.** These include basic skills, such as reading and mathematics, as well as social skills and problem solving.
- **Curriculum strands and themes.** These are the organizing principles around which the curriculum is built. They are broad—e.g., Human Societies—and integrate content from multiple areas.
- **Major themes.** Each curriculum strand is further divided into major themes, e.g., Environments or Diversity.
- **Questions.** Questions are used to further define major themes and focus activities.
- **Unit development.** From the major theme and the questions, knowledge, and skills related to the concepts, teachers plan activities that will lead to the development of knowledge and skills which will answer the questions. Teachers also

collect resources and develop actual lesson plans and assessment strategies.

- **Evaluation.** Through an assessment of student progress the unit is evaluated.

When considering Shoemaker's essential components, teachers give broad definitions to her terms. For example, major themes may be drawn from existing structures within a school, such as works of literature or cross-subject areas.

Successful efforts toward integration tend to include the above elements or a variation. Palmer (1991) suggests that teachers and curriculum supervisors work together to identify common goals, objectives, skills, and themes. From these lists, the teachers work together to find appropriate connections to content areas. For example, research skills may be a part of science, math, music, language arts, and social studies. From this discussion, teachers devise plans for teaching. Any plan takes time, empowered teachers, flexible schedules, and teams whose members are able to work together (Brandt 1991).

Just as curriculum integration changes the way instruction looks, it may also lead to a change in assessment strategies. As students are involved in "real" tasks, teachers find that they need to design performance assessments that give a true picture of student understanding of concepts.

When beginning an implementation plan, Jacobs's experience has led her to identify four steps that are integral to success (1991, p. 27). They are:

1. Conduct action research to learn about current resources and best practices.
2. Develop a proposal for integration.
3. Implement and monitor the pilot program, with continual assessment of students and the program.
4. Adopt a program and continue to assess.

SUMMARY OF RESEARCH FINDINGS

The findings support the positive effects of curriculum integration. Lipson (1993) summarizes the following findings:

- Integrated curriculum helps students apply skills.
- An integrated knowledge base leads to faster retrieval of information.
- Multiple perspectives lead to a more integrated knowledge base.
- Integrated curriculum encourages depth and breadth in learning.
- Integrated curriculum promotes positive attitudes in students.
- Integrated curriculum provides for more quality time for curriculum exploration.

Recommendations

Factors that need to be considered in an integrated curriculum are (Gehrke 1991; Jacobs 1989; Lipson 1993; MacIver 1990):

- Common definitions of terms (such as theme, strand, or outcome)
- Available resources
- Flexibility in scheduling
- Support services
- Subjects and concepts that will be integrated
- Links between integration and broader outcomes
- Curricular scope and sequence
- How evaluation will occur
- Parent and community support
- Themes that promote the transfer of learning and connections
- Team planning time that is used to exchange information about content, students, special areas of teacher expertise, and teaching methods.

When teachers select themes, it is important that they avoid themes of convenience that have no meaningful, larger concepts. While an individual teacher may or may not have expertise in each content area, members of teacher teams are able to work together to find connections that cut across single content areas (Lipson 1993). Themes that promote the linking of concepts and lead to deeper understanding are more effective. A theme is more than a series of activities; it is a way to facilitate student learning and understanding of conceptual connections. Activities that are arbitrarily connected are not helpful (Brophy and Alleman 1991). Thus, an integrated curriculum is a means, not the end result. Poorly designed units do not achieve this end of deeper understanding and thorough learning.

Each of these elements needs to be considered as teachers look at curriculum integration. It is necessary for each school to determine the best procedure to meet the needs of the particular student body. A secondary school may face different constraints than an elementary school. Rather than move from a traditional, subject-specific curriculum to an integrated curriculum in one sudden sweep, schools find more success when they make gradual changes, making sure that everyone involved feels a sense of ownership of and commitment to the changes.

Some areas may lend themselves more naturally to integration, such as math and science or language arts and social studies. However, as reported above, there have been very successful efforts in nontraditional alliances, e.g., art and math. As teachers are more and more involved in integration, they find that they see connections that they had not seen initially. As teachers see these connections and develop learning experiences and assessments built around the connections, students also understand them. This understanding leads to more successful learning.

Areas for Further Research

An integrated curriculum may not address a logical sequence within a discipline such as mathematics. Further research into the effect of this will be needed if teachers are to look at the role of sequence in curriculum selection decisions. It may be that sequence decisions currently held are more a product of textbooks than actual necessity for understanding. When the curriculum is based on broad concepts linked in thematic units, students may acquire knowledge in very different ways, making the traditional sequence less meaningful. This is an area that has not been fully explored in the research on integrated curriculum.

Another implication, cited by Humphreys (1981), revolves around assessment of student learning. If themes are guided, in part, by student and teacher interest, there will be less consistency of experience than many teachers currently strive for. This may impact performance on standardized tests and require alternative methods of assessing student understanding of essential concepts.

Teachers who are not provided with adequate inservice or time to thoughtfully develop an integrated curriculum may go to an unstructured, "a little of everything" approach (Jacobs 1989), rather than a truly integrated approach to learning. This does not facilitate the kinds of understanding and achievement that integrated programs discussed in this report have documented. Best practices for initial and ongoing inservice training need to be explored more fully.

A related issue is the extent to which preservice teachers are prepared to teach in settings that are committed to curriculum integration.

A final word of caution is for the teacher who feels that this must be an all-or-nothing scenario. There may well be instances in which curriculum integration is not the most appropriate way to go. A careful examination of successfully integrated programs may suggest the extent to which integration can or should be implemented.

Key References

Aschbacher, P. "Humanitas: A Thematic Curriculum." *Educational Leadership* 49/2 (1991): 16-19.

A description of the Humanitas program, an interdisciplinary secondary-level program. The goals of the program are twofold—professional growth for the teachers and enriched humanities for the

students. Impacts on students and teachers are described, and insights from students are included.

Benjamin, S. "An Ideascope for Education: What Futurists Recommend." *Educational Leadership* 47/1 (1989): 8-16.

An article considering future trends and needs in education.

Bonds, C.; Cox, C., III; and Gantt-Bonds, L. "Curriculum Wholeness through Synergistic Teaching." *The Clearing House* 66/4 (1993): 252-254.

An article presenting a definition and description of "synergistic teaching" in an integrated curriculum. The authors contend that this method of teaching is more effective than separate-subject teaching.

Brandt, R. "On Interdisciplinary Curriculum: A Conversation with Heidi Hayes Jacobs." *Educational Leadership* 49/2 (1991): 24-26.

An interview with Heidi Hayes Jacobs, a professor at Teachers College, Columbia University. Topics include the meaning of interdisciplinary curriculum, the impact of national standards, and factors in implementation.

Brophy, J., and Alleman, J. "A Caveat: Curriculum Integration Isn't Always a Good Idea." *Educational Leadership* 49/2 (1991): 66.

An article stressing the importance of considering educational goals in designing an interdisciplinary curriculum.

Caine, R., and Caine, G. *Making Connections: Teaching and the Human Brain.* Alexandria, VA: Association for Supervision and Curriculum Development, 1991.

A book integrating findings from neuropsychology with educational methodologies. Specific education recommendations are given regarding interdisciplinary studies, thematic teaching, integration of the arts, and alternate forms of assessment and grading practices.

Cromwell, S. "A New Way of Thinking: The Challenge of the Future." *Educational Leadership* 49/1 (1989): 60-64.

A discussion of challenges and issues related to future trends in education.

Dressel, P. "The Meaning and Significance of Integration." In *The Integration of Educational Experiences*, 57th Yearbook of the National Society for the Study of Education, edited by Nelson B. Henry. Chicago: University of Chicago Press, 1958, 3-25.

A review of the meaning and elements of integrated curricula during the 1950s. The importance of this movement is discussed.

Edgerton, R. *Survey Feedback from Secondary School Teachers that are Finishing their First Year Teaching from an Integrated Mathematics Curriculum.* Washington, DC, 1990. (ED 328 419)

A report summarizing the results of a survey of secondary mathematics teachers who were involved in an integrated mathematics curriculum for one year. A majority of the teachers—83 percent—wanted to continue with the integrated curriculum. A copy of the survey is included.

Fogarty, R. *The Mindful School: How to Integrate the Curricula.* Palatine, IL: Skylight Publishing, Inc., 1991.

A book describing ten ways to integrate a curriculum with pros, cons, and examples for each model. Worksheets for teachers interested in exploring a particular model are included at the end of each chapter.

Friend, H. *The Effect of Science and Mathematics Integration on Selected Seventh Grade Students' Attitudes Toward and Achievement in Science.* New York: New York City Board of Education, 1984.

A report on a study to determine the effect of an integrated mathematics/science seventh grade physics unit on students' attitudes toward and achievement in science. Groups of students using the integrated curriculum achieved better than similar students using the nonintegrated curriculum.

Gehrke, N. "Explorations of Teachers' Development of Integrative Curriculums." *Journal of Curriculum Supervision* 6/2 (1991): 107-112.

An article reporting the findings from a study of integrated curriculum development in six schools. Findings include the need for teachers to have time to work together and the fact that coaching plays a role in teachers' development of integrated curriculum. Definitions are also provided.

Good, C. (Ed.). *Dictionary of Education*, Third Edition. New York: McGraw Hill, 1973.

A reference for definitions and explanations of educational terms.

Greene, L. "Science-Centered Curriculum in Elementary School." *Educational Leadership* 49/2 (1991): 48-51.

A description of the interdisciplinary curriculum in an elementary school in the Salinas City School District. Examples from the curriculum, teacher training related to the curriculum, early evaluation results, and impressions from participants are included.

Humphreys, A.; Post, T.; and Ellis, A. *Interdisciplinary Methods: A Thematic Approach*. Santa Monica, CA: Goodyear Publishing Company, 1981.

A book exploring the how and why of thematic teaching. It includes many examples of interdisciplinary themes that encourage students to discover, explore, and experiment. Links are made among the humanities, communication, arts, natural sciences, mathematics, and social sciences.

Jacobs, H. H. *Interdisciplinary Curriculum: Design and Implementation*. Alexandria, VA: Association for Supervision and Curriculum Development, 1989.

A survey of relevant information on interdisciplinary teaching from various perspectives. Both design and implementation are discussed, along with a rationale for interdisciplinary teaching.

Levitan, C. "The Effects of Enriching Science by Changing Language Arts from a Literature Base to a Science Literature Base on Below Average 6th Grade Readers." *Journal of High School Science Research* 2/2 (1991): 20-25.

A report of the effects upon the attitude and achievement of a group of below-average sixth graders generated by enriching the language arts curriculum from a literature base to a science base. While attitude stayed constant, achievement increased for 12 of 17 students.

Lipson, M.; Valencia, S.; Wixson, K.; and Peters, C. "Integration and Thematic Teaching: Integration to Improve Teaching and Learning." *Language Arts* 70/4 (1993): 252-264.

A thematic approach to teaching is presented as a way to replace fragmented teaching with integrated contexts. A carefully selected theme provides for coherence and serves as a focus for activities and teaching material.

MacIver, D. "Meeting the Need of Young Adolescents: Advisory Groups, Interdisciplinary Teaching Teams, and School Transition Programs." *Phi Delta Kappan* 71/6 (1990): 458-465.

A review of three elements found to be successful in middle schools: advisory groups, interdisciplinary teaching teams, and school transition programs. The data are taken from the John Hopkins University Center for Research on Elementary and Middle Schools (CREMS).

Markus, M., media specialist. Quoted in Shoemaker, B. "Education 2000 Integrated Curriculum." *Phi Delta Kappan* 72/10 (1991): 797.

A description of the Education 2000 Integrated Curriculum task force work in the Eugene, Oregon Public Schools. Includes an overview of brain research supporting curriculum integration and a description of the major themes and concepts in the Eugene curriculum. Each strand is illustrated with a list of themes and concepts. The implementation process is described.

Meckler, T. *Reading Improvement Using the Health Curriculum.* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 1992. (ED 254 836)

Report on the results of a traditional health curriculum vs. a health curriculum with a reading/language arts format. The subjects, 389 junior high students, were placed in one of the two groups. Those in the experimental group made greater gains in reading and language arts than the control group.

Oster, L. "Sub-Saharan Africa: An Interdisciplinary Curriculum Unit." *English Journal* 82/4 (1993): 24-28.

A description of an interdisciplinary curriculum that combines English, Studio Art, and Global Studies. Using the framework of "power," students study Sub-Saharan Africa. Examples of work done in English, art and global social studies are included, together with evaluations by the teacher and suggestions for others implementing such a unit were included.

Palmer, J. "Planning Wheels Turn Curriculum Around." *Educational Leadership* 49/2 (1991): 57-60.

A description of the system used in Howard County, Maryland Public Schools to create interdisciplinary curricula. Examples of planning wheels for "Smoke Free 2000" and "Consumerism" are included.

Pappas, C. "Focus on Research: Collaborating with Teachers Developing Integrated Language Arts Programs in Urban Schools." *Language Arts* 70/4 (1993): 297-303.

Power and authority issues between elementary teachers and university researchers, as well as between elementary teachers and their students, were explored in the context of the development of an integrated language arts program.

Perkins, D. N. "Educating for Insight." *Educational Leadership* 49/2 (1991): 4-8.

Perkins discusses the need for teachers to promote thoughtful, insightful learning in their classrooms. The use of "mental models," "coaching," and "teaching for transfer" are suggested as effective ways to move toward more insightful learning.

Schmidt, W. *Curriculum Integration: Its Use in Language Arts Instruction.* Research Series Number 140. East Lansing, MI: Institute for Research on Teaching, 1983. (ED 241 942)

Report of a study that examined the amount and kinds of language arts curriculum integration in elementary classrooms, contextual factors associated with the integration, and the relationship between the teachers' thinking about integration of the curriculum and the amount of integration in their classrooms.

Shoemaker, B. "Integrative Education: A Curriculum for the Twenty-First Century." *Oregon School Study Council* 33/2 (1989).

This document discussed meanings of integration; why there is a need for integrated curricula; models of integrated curricula; what the Eugene, Oregon integrated curriculum project is; contrasts between an integrated and a subject-centered curriculum; and support for an integrated curriculum.

Vars, G. *A Bibliography of Research on the Effectiveness of Block-Time Programs.* Ithica, NY: Junior High School Project, Cornell University, 1965.

A review of research related to block-time and core programs in middle and junior high schools.

Vars, G. *Interdisciplinary Teaching in the Middle Grades: Why and How.* Columbus, OH: National Middle School Association, 1987.

A description of interdisciplinary curriculum from the middle school vantage point, including specific information about why this approach is appropriate for this age group and how it might be organized.

Vye, N. *The Effects of Anchored Instruction for Teaching Social Studies: Enhancing Comprehension of Setting Information.* Paper presented at the Annual Meeting of the American Educational Research Association, Boston, MA, April 1990. (ED 317 984)

A paper describing a three-year experiment designed to enhance literacy and social studies skills in fifth graders. Positive results were replicated across teachers and in multiple settings. "At-risk" and "average" students benefited from the integrated experience.

Willett, L. *The Efficacy of Using the Visual Arts to Teach Math and Reading Concepts.* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 1992. (ED 348 171)

A paper documenting the effect of the use of art lessons to enhance the comprehension of specific mathematics concepts in fifth grade students. Pre- and post-tests were given to 87 fifth graders. Sample lessons plans are included.

Williams, D. *A Naturalistic Study of Unified Studies: A Holistic High School Program.* Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, April 1991. (ED 333 552)

An ethnographic study of an integrated university/high school partnership. Observations, interviews, and document analysis indicated that both teachers and students learned from the program's focus on real experiences.

General References

Vocational Education Examples

Briers, G. *Identification of Math and Science Concepts, Skills, and Experiences Provided in Vocational Agriculture in Texas.* Texas A & M University: Department of Agricultural Education, September 1986. (ED 281 035)

This article includes matrices of science and math essential elements. Also describes a project which included reviewing the state Basic Curricululm Guide for Production Agriculture and developing a table of opportunities for students in vocational agriculture to develop concepts and skills in mathematics and science. The authors also describe workshops for teachers which ensured the implementation of the skills matrix.

The Integration of General and Technical and Vocational Education, Trends and Issues in Technical and Vocational Education. Paris, France: United Nations Educational, Scientific, and Cultural Organization, 1986. (ED 274 802)

This book contains eight case studies that describe the state of vocational, technical, and general education in eight Unesco countries and their progress toward the integration of the three types of education. The final chapter of the book presents the conclusions derived from analysis of the case studies.

Ladewig, B. "The Effective Integration of Basic Competencies into an Applied Discipline." *Journal ofVocational Education Research* 12/1 (1987): 11-19.

A group of 399 students in a home economics course integrating basic competencies and employing computer assisted instruction showed significantly greater gains in basic competencies than a control group of 611 students in a similar course.

Martinez, R. "Sparking Interest in Academics: Welding Class Helps Students Improve English, Math Grades." *The Vocational Education Journal* 67/8 (1992): 34-37.

Report of a high school program which incorporated math and English within vocational courses. The findings showed that the majority of the students' academic and welding performances improved or were maintained.

Higher Education Examples

Goldbort, R. "Literature, Science, and Liberal Education: Toward Integrative Studies." *Teaching English in the Two-Year College* 18/2 (1991): 121-125.

Illustrates how science fiction can encourage students to reflect on the interaction of science, humanities, and literature. Suggests thematic teaching approaches based on writings dealing with ethics, biological determinism, and science.

Watkins, B. "In Non-traditional, Interdisciplinary Study at Columbia College, Artists Get a Chance to Broaden Their Horizons, Hone Creativity." *The Chronicle of Higher Education* 37/3 (1990): 17.

A report on a program at Columbia College that allows art students to participate in interdisciplinary studies. Projected outcomes are included.

Elementary Examples

Alaska's Forests...More Than Just Trees. Fairbanks, AK: Alaska State Department of Fish and Game, 1987. (ED 340 564)

This unit emphasizes forest wildlife, ecology, and conservation and includes a teacher's guide with information, interdisciplinary activities, games, and related materials. The thematic approach integrates science, language arts, social studies, mathematics and art.

Berlin, D., and White, A. "Report from the NSF/SSMA Wingspread Conference: A Network for Integrated Science and Mathematics Teaching and Learning." *School Science and Mathematics* 92/6 (1992): 340-343.

Report of a National Science Foundation/School Science and Mathematics Association conference. The conference developed a rationale for integrated teaching and learning of science and mathematics, defined guidelines for the implementation of integrated teaching, and identified high-priority research topics related to the concept of integration.

Bilbe, R. "Primary Place: Teaching with Themes." *Instructor* 102/2 (1992): 84-85.

Presents guidelines for developing thematic units for primary students. The article includes ideas, activities, and experiences for a color unit and for maintaining thematic teaching throughout the year.

Britton, J. *Writing and Reading in the Classroom.* Technical Report Number 8. Berkeley, CA: Center for the Study of Writing, August 1987. (ED 287 169)

A report describing several teaching methods designed to integrate the teaching of reading and writing at the elementary and secondary levels.

Brophy, J. *Mary Lake: A Case Study of Fifth Grade Social Studies (American History) Teaching.* Elementary Subjects Center Series Number 26. East Lansing, MI: Michigan State University Institute for Research on Teaching, December 1990. (ED 334 111)

A case study of a month-long unit in a fifth grade class that involved the integration of history and language arts and an emphasis on writing and cooperative learning.

Drake, J., and Drake, F. "Using Children's Literature to Teach about the American Revolution." *Social Studies and the Young Learner* 3/2 (1990): 6-8.

Reports on a third-fourth grade class, finding that students responded enthusiastically to the study of history through literature.

Klein, R., and Prendergast, C. "Courage and Survival." *Instructor* 101/2 (1991): 14.

Presents suggestions for developing a thematic teaching unit to help students overcome fear by learning about the courage of survivors in literature.

Malecki, C. "Teaching Whole Science in a Departmentalized Elementary Setting." *Childhood Education* 66/4 (1990): 232-237.

A description of an integrated science program in one elementary school.

Mansfield, B. "Students' Perceptions of an Integrated Unit: A Case Study." *Social Studies* 80/4 (1989): 135-140.

A description of a case study of fifth and sixth graders involved in an integrated unit.

Spiegel, D. "Materials for Integrating Science and Social Studies with the Language Arts." *The Reading Teacher* 44/2 (1990): 162-166.

An article describing instructional resources helpful for elemenary teachers to use when teaching interdisciplinary science/social studies/language arts.

Secondary Examples

Goldbort, R. "Science in Literature: Materials for a Thematic Teaching Approach." *English Journal* 80/3 (1991): 69-73.

This article outlines units that create opportunities for students to bring together literature and science.

Needham, N. "Radical Restructuring: Changing School Culture." *NEA Today* 11/8 (1993): 15.

A description of a high school's implementation of a four-period block to replace a traditional seven-period day.

Waites, B. "Targets in the Twilight Zone." *Times Educational Supplement* 40/6 (1993): 31.

This article describes "The Search for the Lost Village," an interdisciplinary experience that focuses on physical, human, and environmental geography.

Westerberg, J., and Whiting, J. "Popcorn: An Explosive Mixture of General Mathematics and General Science." *Mathematics Teacher* 85/4 (1992): 306-309.

An example of a unit integrating science and mathematics.

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SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Snapshot #29

Implementing a Nongraded Elementary Program

Konnoak Elementary School
Winston-Salem, North Carolina

Kathleen Cotton

> *Nongraded education is the practice of teaching children of different age and ability levels together in the same classroom, without dividing them or the curriculum into steps labeled by "grade" designations.*
> —J. Gaustad, 1992

Research Findings

Once out of fashion and even disparaged, nongraded grouping for primary and sometimes upper-elementary students is once again being studied and implemented in many schools across the U.S. and Canada. The Northwest Regional Educational Laboratory's research "close-up," *Nongraded Primary Education* (April 1993) identifies research findings in support of nongraded—or "multiage"—grouping practices, including:

1. Nongraded grouping produces achievement outcomes which are at least equal and sometimes superior to those produced by traditional graded structures.
2. Compared to students educated in traditional graded arrangements, those in nongraded settings have more positive attitudes toward school, classmates, and teachers, as well as higher self-concepts as learners and higher general self-esteem.
3. Notable behavioral outcomes of nongraded grouping include greater social and leadership skill development, better school attendance, and markedly lower levels of aggression and other antisocial acts.
4. Nongraded grouping decreases the incidence of retention and improves relationships between parents and school personnel.
5. Nongraded settings are more congruent than single-grade grouping with the kinds of curricular content and learning activities that are developmentally appropriate for young children.

This last point calls for some elaboration. Research on developmentally appropriate education for young children has identified an array of practices that support the way these children grow and learn. Researchers identify nongraded grouping as one element of developmentally appropriate practice and recommend its use in conjunction with others, including:

- School staff acceptance of and respect for individual differences in children's developmental stages, abilities, learning styles, and interests
- Curriculum that is integrated in such a way that traditional subject matter knowl-

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edge is gained through involvement with learning centers and projects organized around themes

- Curricular activities focused on developing the child's physical, social, emotional, and intellectual well being, self-esteem, and positive regard for learning
- Curricular materials that are concrete, real, and relevant to children's lives
- Active, hands-on learning activities that call for children to interact with materials, peers, adults, and schoolmates of different ages
- A combination of teacher-selected and student-selected activities
- The use of cooperative learning groups organized heterogeneously by gender, ethnicity, age, ability level, and so on
- Communication with and involvement of parents in conferences, classrooms, and home learning activities
- Assessment of student progress that includes frequent observation and narrative recording of student performance, portfolio development, and active involvement of students themselves.

Situation

Located in Winston-Salem, North Carolina, Konnoak Elementary School serves 382 students in grades K-5. White students make up 60 percent of the student population, and African-American students comprise nearly all of the other 40 percent.

Konnoak is a neighborhood school, with parents in the attendance area describable as members of the working middle class. A designated center for special education services, Konnoak serves approximately 70 students classified as Trainable Mentally Handicapped, Educable Mentally Handicapped, Behaviorally/Emotionally Handicapped, or Visually Impaired. The Konnoak staff—certified and classified—is approximately two-thirds white and one-third African-American.

Context

Having had positive experiences with non-graded grouping in the 1970s, Konnoak principal Janice Sherrill responded favorably when some of her staff began to express interest in trying this approach.

Both research and experience had shown Ms. Sherrill and her teachers that having to repeat grades is very traumatic for students and increases their chances of dropping out later in their school careers. They were also aware that multi-age grouping has been used successfully to meet the learning needs of slower students without forcing them to repeat an entire year's schoolwork.

IMPLEMENTATION

Konnoak teacher Kathy Priddy had amassed some experience with multi-age grouping when she taught a combined class of kindergarten and first grade children during the 1989-90 school year. "It was obvious to me that having these students in class together was beneficial to them both academically and socially," says Ms. Priddy. "The only problem was the difficulty involved in trying to maintain separate curricula for them according to their grade levels." Even so, the positive effects on students in the combined class led Ms. Priddy to continue this arrangement into the 1990-91 school year.

At that time, Konnoak staff members were receiving information and assistance for restructuring through the school's participation in the National Education Association's Mastery in Learning Consortium. Another source of consultant assistance during this period of time was Dr. Dudley Shearborn of nearby Salem College.

Both Dr. Shearborn and the NEA consultants made essentially the same observations about Konnoak's initial involvement in multi-age grouping: they indicated that it is neither necessary nor desirable to maintain separate curricula when working with multi-age groups. They cited research showing that student outcomes improve when the artificial pairing of student age with a particular grade-level curriculum is removed. And they provided encouragement and support for the transition to true nongraded grouping, in which children of different ages pursue the same curriculum, each at his or her own learning rate.

Ms. Priddy made the transition from "split-grade" to genuine nongraded grouping in the middle of the 1990-91 school year. Later in the year, a grant from the local Mary Babcock Foundation made it possible for other Winston-Salem teachers to visit Ms. Priddy's classroom and observe the multi-age program in operation.

A colleague who collaborated with Ms. Priddy and observed the development of her program was Konnoak teacher Barbara Manning, who implemented multi-age grouping with students in grades three through five at the beginning of the 1991-92 school year. Ms. Priddy's own classroom, meanwhile, became a K-2 group.

EXPANSION

Since that time, interest in and implementation of nongraded classes—named Cross-Age Learning Settings (CALS) by Konnoak staff—has spread to other teachers. In the complete absence of administrative directives or pressure, four more Konnoak teachers were teaching CALS classes as of the 1992-93 school year. Thus, in addition to the original K-2 and 3-5 classes, Konnoak implemented a second K-2 class, a second 3-5 class, a 1-2 class, and a 4-5 class. The addition of a staff member for the 4-5 class enabled Konnoak staff to progress toward another of their goals—to reduce class size to 18 or fewer.

Expressions of interest in nongraded grouping by additional Konnoak teachers suggest that the use of this structure is likely to expand to additional teachers and classrooms.

In the beginning, placement in the CALS classes was based on teacher nomination of students who might otherwise be considered for retention. Recognition of the benefits of the classes for *all* students, however, has led to heterogeneous assignment of students to both CALS and single-grade classes.

SPECIAL EDUCATION STUDENTS

The CALS classes are also increasing mainstreaming options for the school's large population of special education students. Jane Gurley, whose class consists mostly of children classifiable as third, fourth, and fifth graders, was among the first to see the potential of multi-age grouping for meeting the needs of these students. Educable Mentally Handicapped children and those classified as Behaviorally/Emotionally Handicapped have evidenced dramatic improvements in behavior during the past two school years as a result of being mainstreamed into CALS classes. And, as the research predicts, withdrawn and socially isolated older children have developed social skills and confidence as a result of in-class exposure to and opportunities to interact with younger children. As for the Learning Disabled children at Konnoak, they now have a daily half-hour of interaction with the LD specialist; the rest of their time they are mainstreamed.

TEACHER OVERVIEW

Asked for a general overview of the way the CALS classes operate, the teachers' group indicated that most activities begin with presentations to the whole class, followed by work within cooperative groups which are sometimes organized on the basis of skill needs and sometimes on the basis of student interest. It is their experience that children open up and participate much more readily in small groups than they do before the whole class.

There is a great deal of peer tutoring—sometimes set up as a formal assignment, but just as often pursued spontaneously as students seek each other's help and offer to share what they have learned. When skill groups meet, those older students who want to relearn or review material they have studied before can choose to sit in as this material is being introduced to another group. Just as often, younger children are exposed to lessons designed primarily for older students, thereby getting a preview of future learning activities and a chance to try their hands at material that represents a "stretch" for them, without concern about being evaluated.

When the concept of multi-age grouping is first introduced to parents, they are often apprehensive about its effect on older and academically gifted students, fearing that their progress might be slowed by the presence of younger and less advanced students. It is not surprising, therefore, that Konnoak parents expressed this concern in the beginning.

While indicating that the parents' current views could best be gleaned from the parents themselves (during an activity to take place later in the visitation), the CALS teachers did remark that (1) no parents have withdrawn their children from the CALS classes, (2) many parents of children currently placed in traditional single-grade classes have expressed interest in moving them into CALS classes, and (3) most parents of children classified as academically gifted have chosen to keep their students at Konnoak rather than sending them to special gifted classes at other schools.

In addition to the state-mandated End-of-Grade Tests, Mrs. Sherrill notes that the CALS teachers have become involved in using more authentic performance assessments—such as student writing portfolios and case studies—and conduct action research on the utility of the different teaching and assessment techniques they use.

Staff development activities of particular relevance to the school's CALS classrooms include a schoolwide whole language retreat supported by a Chapter 2 mini-grant; school-level staff development activities in school improvement, restructuring, and research; and a district collaboration with Salem College to provide staff development in integrating the curriculum. Staff development in multicultural programming has led to long-term learning units on African-American and Native American cultures and, at the time of the visitation, a focus on the cultures of Pacific Rim nations.

Practice: Multi-Age Grouping in Konnoak Classrooms

K-1-2: MS. PRIDDY

Because North Carolina provides support for teaching assistants at the kindergarten level, teacher Kathy Priddy and her assistant, Roland Hayes, could be observed working as a team with their K-1-2 class. Like others of Konnoak's classes, this one had displays reflecting the school's Pacific Rim learning activities. Colorful maps of Vietnam, together with drawings and writings depicting Vietnamese clothes, food, building materials, and art, dominated one side of the classroom.

Mr. Hayes facilitated a math activity in which the class's 18 students sat in a semi-circle on the floor near the chalkboard and developed math problems whose answer was the day's date, which was the 17th. Children with more advanced math skills constructed problems such as 34-17=17, while younger ones generated simpler ones, such as 5+5+5+2=17. Each contributing student was praised for his or her contribution, and Mr. Hayes helped those whose initial attempts were incorrect to work through a sequence of steps to arrive at an answer of 17.

With the children still seated on the floor around him, Mr. Hayes then recited a proverb: "A weed is a plant whose virtues have not yet been discovered." After explaining the meanings of the key words in the proverb, Mr. Hayes asked the children for their interpretations of it, and a lively discussion ensued.

Later, as students were putting together jigsaw puzzles depicting scenes involving Disney characters, Ms. Priddy called attention to the fact that these puzzles are much more complex than the 12-piece puzzles that used to be provided for kindergarten classes. "We didn't know what these kids were capable of," she said, "until they were in an environment where they could work with more sophisticated materials."

During a writing workshop activity, Ms. Priddy also explained that the whole language approach to developing communication skills had equipped her with techniques for differentiating between, for example, a true skill deficit in writing and a simple need for additional writing practice.

As one learning activity followed another, Ms. Priddy and Mr. Hayes could be observed circulating among groups of students, monitoring their work and providing assistance as needed. Student conversation, meanwhile, was reasonably quiet and focused on learning activities.

One notable feature of this class was the presence of a blind student. Although a special education aide was on hand to help this girl with modified versions of the class's learning activities, she also received spontaneous offers of help and was shown other acts of kindness from fellow students as the day progressed.

The sense of the group as a "family" was reinforced near the end of the day, as children made presents for "the new baby," (a newborn sibling of one of the students) and also celebrated Mr. Hayes's birthday.

K-1-2: MS. PURCELL

In a large classroom sectioned into activity areas by bookcases and furniture, Terri Purcell's more capable readers—most of them second graders—were reading stories to younger children. These readers had obviously learned how to make the story-reading activity a true learning experience for their younger classmates: They held their books—or had a classmate hold them—in such a way that the listening children could see the text and illustrations as the stories were being read, and some readers pointed to each word as he or she read it.

After reading a page or two, the reader in one group pointed out key features of the accompanying illustration, much as a teacher might do when reading to students. In another, the reader used different voices for the words spoken by the story's various characters. Still another paused and asked questions periodically while reading the story—either about the story's plot or about what her listeners might have done in the story character's position. Asked how it felt to lead the story activity, one reader said, "We get to help the kindergarten kids; we show them things they don't know yet."

The story-reading was followed by a cross-age tutoring activity, in which Ms. Purcell's students worked on reading assignments with one of Konnoak's fifth grade classes.

3-4-5: MS. GURLEY

A purposeful, businesslike atmosphere pervaded Jane Gurley's class as students sat in mixed-age groups at tables for four, some working on morning math activities and some writing in their journals about the weekend just past. Ms. Gurley had taken roll while students were beginning their work and quickly dispensed with other morning "housekeeping" matters. She then moved among the students, responding to questions and offering suggestions for their journal writing activities.

This classroom featured a "Future Famous Americans" display, which included pictures of Ms. Gurley's students and descriptions they had written about themselves. Other displays included haiku poems written by the students as part of their focus on Japanese culture, and geometric patterns designed and colored by students and reflecting a wide range of complexity.

The administration of the state-mandated CAT is one of the few occasions when CALS teachers call attention to students' grade levels. Because students in grades 3-5 were to be tested on the day following the visitation, Ms. Gurley prepared her class by describing how the testing was to proceed and responded to their concerns with explanations and reassurances. "Go to bed by 9:00 p.m.," she recommended, "and be sure to eat a good breakfast. And remember, you are not expected to know the answers to everything on the test. Just do your best."

Following the orientation to the upcoming testing, Ms. Gurley assembled the children in the classroom reading corner and read *The Dragon's Robe*, a story about a king who failed to take leadership responsibility for his people. Relaxed and attentive, the students commented on the important role of dragons in Chinese culture and made observations about the story and what message it might hold for them.

3-4-5: MS. MANNING

A visit to Barbara Manning's class provided opportunities first to observe students working on fractions and division problems in cooperative groups, and then to talk with them about their opinions of CALS classes. In response to the question, "How do you like being in a class with both older and younger kids?" students gave the following responses:

- "I like it. You get to learn with kids ahead of you, so when you get there, you already know some of it."
- "Sometimes if your work is too hard, older kids help you."
- "I like it that we can help the third graders, because if we forget, we can learn it again."

- "When you help younger kids, it makes you feel happy, because you feel like you know everything."

- "Well, sometimes the older kids boss us around, but sometimes we get to go on a field trip and they don't."

- "I like being in Ms. Manning's class again. She knows what you need to learn, and you can get used to her. You know what she'll take and what she won't take."

Parents' Views of CALS

Two gatherings with parents of children in CALS classes provided a wealth of information about how the program is perceived by them. All eight parents said they had reservations at first, fearing that their children might not get enough individual attention or that older and faster-learning children might be held back by being in class with younger ones. However, all eight have seen their children benefit academically and interpersonally from being in the CALS classes and, consequently, all these parents have become ardent supporters of the program. In their own words:

- *Mrs. W., mother of a third grader*: "My daughter is certified for academically gifted class, and I was worried she might not be challenged enough in a CALS class. What happened, though, is that she willingly spends more time on her homework and even bought a set of "division flashcards" with her own money! I like it that she'll be with an excellent teacher like Ms. Manning for three years, and I think she'll make a better transition to middle school than her brother did."

- *Mrs. H., mother of a third grader*: "She has learned a lot of responsibility. She relates better to her younger brother than before. I thought maybe the handicapped kids would hold the class back, but they don't seem to. Maybe this way they will have better attitudes toward the handicapped when they get older. I hope so."

- *Mrs. R., mother of a third grader and a fifth grader*: "Both my kids are in CALS classes. I wondered at first if there would be enough structure in the classes. The staff took the time to explain it to us thoroughly, though, and of course it was optional, which made it much more acceptable. My kids' appetites for learning have really increased. And my fifth grader's social skills are really improving, because she has leadership responsibility in her class. I used to think of achievement as grades only; but now I can see the importance of achievement in leadership and helping others."

- *Mrs. C., mother of a third grader*: "I like the small classes, and my son doesn't get bored. He's learning a lot. He even came home the other day feeling good because he told a fifth grader how to spell a word."

- *Mr. and Mrs. P., parents of a kindergartener and a second grader*: "Our older daughter has been in the program since the beginning, and our other daughter just started. They are so different, but the CALS classes meet both their needs. We totally support what goes on in the classes. We have such a great communication system with the teachers here...nothing is secretive; they share everything with us. Our older daughter was so shy, and this year she narrated part of the school program. You would not have believed she could do that! Our other daughter could have been in an academically gifted class, but she gets the challenging academic material she needs right here in the K-2 class."

- *Mr. Ch., father of a fifth grader*: "She was in CALS last year and is again this year. Look at how much she's improved in just that short time [displaying report cards]. My wife and I met with the learning disabilities teacher, because our daughter was easily distracted and had a slight learning problem. After being in the CALS class, the testing doesn't show any learning problem anymore. She's working up to speed without special ed."

- *Mrs. G., mother of a fourth grader*: "We were so lucky to move into the Konnoak area. I've been thoroughly impressed. The teachers are outstanding. Without the right teachers, this wouldn't work at all."

These positive parental responses are corroborated by the results of a survey completed by parents of CALS students during the spring of 1993. In response to 30 questions covering their children's attitudes toward school, their own attitudes, the CALS program, the school's support programs, and the quality of school-home communication, the incidence of responses of "outstanding" or "good" was over ninety percent.

Other Indicators

Another survey was conducted in the spring of 1993 with CALS student participants. Students were asked to select a smiling, neutral, or frowning face as representing their feelings about various aspects of their CALS experiences—working in cooperative groups, sharing ideas, helping and receiving help from others, interacting with teachers, and so on. Student respondents gave positive (smiling) responses to nearly 70 percent of the items listed and negative (frowning) responses only about two percent of them.

Narrative case study reports shared by CALS teachers provide detailed documentation of children's needs and successes, track both academic and affective outcomes, and offer a much more complete picture of children's performance than that which emerges from standardized tests. They enable teachers to identify and address problem areas quickly. Most that were available for review indicate considerable progress on the part of students.

It is also very much worth noting that Konnoak was selected by the America's Best Schools Project of *Redbook* magazine as one of the nation's 177 best elementary schools. Along with its enriched arts courses and computer literacy offerings, Konnoak's CALS program was a major reason for its citation as one of the country's top schools. The April 1993 issue of *Redbook* identifies the winning schools and, in addition to their individual strengths, cites the general characteristics they share: high levels of parent involvement, caring and committed principals, nurturing teachers, an emphasis on writing (especially whole language), innovative uses of technology, alternative assessments, supportive learning environments, and close relationships with their communities.

Those who want to know more about the CALS program at Konnoak are encouraged to contact Ms. Janice J. Sherrill, Principal, Konnoak Elementary School, 3200 Renon Road, Winston-Salem, NC 27127, 919/788-7911.

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SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Snapshot #30

School Improvement Through Teacher Decision Making

Laurel Elementary School
Junction City, Oregon

Al Fitzpatrick

Research Findings

Effective leadership and decision making are instrumental to the success of school improvement projects. According to *Effective Schooling Practices: A Research Synthesis / 1990 Update* (Northwest Regional Educational Laboratory, April 1990), the following practices have been shown to foster positive student achievement and affective outcomes:

1.1.1 *Instruction is Guided by a Preplanned Curriculum*

2.1.1 *Everyone Emphasizes the Importance of Learning*

- d. Everyone accepts that school is a place for learning. This is reflected in the use of mission statements, slogans, mottos, and displays that underscore the school's academic goals.
- e. When educational issues arise, student learning considerations are the most important criteria used in decision making.

2.3.1 *Strong Leadership Guides the Instructional Program*

- f. The principal and other leaders seek out innovative curricular programs, observe these, acquaint staff with them, and participate with staff in discussions about adopting or adapting them.
- l. Resources needed to ensure the effectiveness of instructional programs are acquired; allocations are made according to instructional priorities.
- m. School leaders establish standard procedures which guide parent involvement. Emphasis is placed on the importance of parental support of the school's instructional efforts.
- p. Leaders express an expectation and strong desire that instructional programs improve over time. Improvement strategies are organized and systematic; they are given high priority and visibility; implementation of new practices is carefully monitored; staff development is supported.

2.3.2 *Administrators and Teachers Continually Strive to Improve Instructional Effectiveness*

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e. The full staff is involved in planning for implementation; specific recommendations and guidelines provide the detail needed for good implementation; plans fit the local school context and conditions.

f. Roles and responsibilities for the various aspects of the school improvement effort are clearly specified.

j. Staff allow adequate time for innovations to become integrated into the life of the school; ongoing support is provided to teachers during the implementation process.

2.3.3 Staff Engage in Ongoing Professional Development and Collegial Learning Activities

b. Adequate time is set aside for staff development activities, and at least part of that time is made available during the regular work day.

c. Staff members have input into the content of professional activities.

g. Staff development activities include opportunities for participants to share ideas and concerns regarding the use of new programs and practices.

k. Staff members learn from one another through peer observation/ feedback and other collegial learning activities.

l. Collegiality is the norm; it is expected that staff members will routinely share ideas and work together toward the end of improving the instructional program.

2.4.1 There are High Expectations for Quality Instruction

e. Staff development opportunities are provided; emphasis is on skill building; content addresses key instructional issues and priorities. Inservice activities are related to and build on each other; incentives encourage participation.

2.7.1 Parents and Community Members are Invited to Become Involved

In Topical Synthesis #6, *School-Based Management*, from the School Improvement Research Series, Kathleen Cotton examines the cycle of centralized-decentralized management in educational organizations throughout the history of education in the U.S. School systems at the turn of the century were, for the most part, small and locally operated. This era was followed by the consolidation of small districts into more centrally controlled organizations.

In the 1960s, in response to a need to be more responsive to local communities, districts did adopt more decentralized management policies. The 1970s and 1980s saw a more centralized response as education reacted to new federal and state legislation. This top-down organizational style was "intended to foster equal and uniform treatment of clients, standardization of products or services, and to prevent arbitrary or capricious decision making" (Darling Hammond 1988).

Current research findings provide the rationale for a return to decentralized management. The following assertions, which are commonly offered as the rationale for implementing school-based management, are drawn from the work of Amundson (1988); Burns and Howes (1988); David and Peterson (1984); English (1989); Levine and Eubanks (1989); Lindelow and Heynderickx (1989); Malen, Ogawa, and Kranz (1990); Marburger (1985); Mojkowski and Fleming (1988); Peterson (1991); and White (1989).

- The school is the primary unit of change. Those who work directly with students have the most informed and credible opinions as to what educational arrangements will be most beneficial to those students.
- Significant and lasting improvement takes considerable time, and local schools are in the best position to sustain improvement efforts over time.
- The school principal is a key figure in school improvement.

- Significant change is brought about by staff and community participation in project planning and implementation.

- School-based management supports the professionalization of the teaching profession and vice versa, which can lead to more desirable schooling outcomes.

- School-based management structures keep the focus of schooling where it belongs—on achievement and other student outcomes.

- Alignment between budgets and instructional priorities improves under school-based management.

Situation

Junction City School District. Two thousand students attend the district's schools, which include one high school, one middle school, and two elementary schools. Junction City is adjacent to Eugene and is a combination of suburban and rural settings.

Laurel Elementary School. Five hundred students in grades one through four attend Laurel Elementary School. Over fifty percent of the students qualify for free or reduced-priced lunches, and the school has a mobility rate of thirty percent.

Context

Laurel Elementary School has implemented a system for involving staff in the decision-making process. The development of the current model has evolved over the past four years. Initially, teachers met in cross-grade-level meetings to discuss curriculum issues. This experience was planned by a building-level team of teachers.

Members of this team served as conveners and met with a group of teachers representing all grade levels. Noncertified staff members were invited to join the groups. Topics for group discussions were selected by the building-level committee and presented to staff members prior to the meeting date. At each meeting they were to discuss one academic area and one nonacademic area.

Examples of academic topics addressed include:

- What skill could have helped you be a better teacher if the previous grade level had taught that skill in reading?

- Explain the use of D'Nealian and handwriting skills development.

- Should we continue to teach cursive writing?

- What is good about the current spelling series, and what material would improve the skill of spelling?

Examples of nonacademic topics include:

- List ways that closure can be brought to the end of the school day for children.

- Share with the group one memory of your elementary school experience.

- What special recognition days should we teach?

The cross-grade-level meetings encouraged communication and raised awareness of curriculum issues. Staff did not feel threatened, since they were merely asked to spend the time in collegial dialogue and submit a list of the topics they discussed. Items from each group list were then consolidated into a master list that was shared with the entire staff. These cross-grade-level meetings represented the school's first attempt to engage staff in meaningful discussions of issues that affected their school. The building-level team that planned these initial activities was the beginning of a School Leadership Team.

Current Practice

A unique aspect of the leadership and communication process at Laurel Elementary is that most staff meetings are not mandatory. Each staff member is merely responsible for knowing what decisions are made at each meeting. Agendas are published prior to each meeting, and the role of facilitator is rotated among members of the staff. Minutes of each meeting are published and provided to every member of the staff. This practice demonstrates a great deal of respect for teachers' time and their professionalism.

The School Leadership Team, or Site Committee (the title for this group has changed over the years), makes building-level decisions and provides the direction for school improvement. Six staff members have been selected and trained as facilitators. Each facilitator has a group of teachers with whom he/she meets throughout the school year. These teacher groups represent different grade levels. Facilitators receive information from the Site Committee and share it with their groups.

Information travels both ways: decisions and items for discussion generated in Site Committee meetings are brought to cross-grade-level committee meetings, and concerns from cross-grade-level meetings are brought to the Site Committee. The staff facilitators coordinate the discussions and activities and are assisted by a member of the Site Committee or the principal.

The Site Committee meets monthly for one hour. Longer meetings are scheduled when needed. The cross-grade-level groups meet quarterly. Facilitators meet prior to the cross-grade-level meetings for planning purposes and meet afterwards if necessary to debrief. Released days, designated for curriculum planning, can be used for committee meetings.

PRINCIPAL PERCEPTIONS

Principal John Davies identifies the following strengths of the site-based management approach taken at Laurel:

- Empowerment of staff
- Shared leadership
- Increased ownership through more direct involvement
- Assumption of the leadership role by staff, with the principal functioning as a motivator
- Better implementation of decisions due to broad-based involvement
- Staff monitoring of improvement activities, with staff members working to motivate one another.

At the same time, Davies offers the following cautions for leaders to consider:

- Lack of control by the principal
- The process may be good, but the outcome may not be
- Potential for a high level of controversy
- Potential for other staff to view the Site Committee as a secret group playing favorites
- The need for facilitators to receive training in how to work with groups and how to best communicate with adults.

In an article written for *Oregon Principal*, John Davies was quoted as saying that, "There are some basic components that will assist an administrator in working through the development of a positive school council. I am suggesting that these components are ordinal in origin. Theoretically, the movement through the steps could be a guide for measured change. The following steps are critical to success:

1. Administrator trained in group interaction skills.
2. Administrator trained in consensus decision making.
3. Administrator trained in time management.
4. A team consisting of a building administrator and five staff are trained in large group communications and interaction skills.
5. A team consisting of the building administrator, five staff, and two parents are trained in community relations and limit setting.
6. The site-based decision-making team begins to implement their agreements as to parameters of the site-based decision-making agreements.
7. The site-based decision-making team's school council conducts training sessions for staff in consensus decision-making strategies."

Laurel Elementary incorporates a differentiated staffing model reflecting the conviction that groups of professionals should have the power to make decisions. As the staff has grown and matured, the framework for communication has also developed further. An interview with principal John Davies resulted in the following observations regarding development of a process for involving staff in decision making.

"Build a model based on staff perception of how much responsibility they are willing to accept. The administrator, meanwhile, must answer the question, 'How much responsibility am I willing to give up?' The strength and power of what we do is founded on agreed focus and purpose. A commitment to the common goal and accountability for achieving it are the main ingredients of the process. Minimum standards, adhered to by all staff, with maximum expectations for implementation, continue to be the identifiable characteristics of our survival.

"Initially, the staff needs only to be involved with curriculum and staff development issues. Committee and group membership is important. Groups need to be carefully selected, and rotation of members may be appropriate at times. Select facilitators based on their expertise and leadership. Each leader will need to expend energy on keeping the vision. They must not be distracted by political, economic, and personal agendas. The vision must be focused on the students. Every aspect of the schooling process must tie to the vision to assure continual growth and implementation."

STAFF PERCEPTIONS

Interviews with staff members provided further insights into the school's success. Staff agree that communication at Laurel Elementary has vastly improved over what it was five years ago. Staff members described it as "open," "powerful," "progressive," "timely" and "relevant."

Teachers, they note, are responsible for developing and facilitating staff meetings. Those interviewed also see it as significant that staff meetings are not mandatory; instead, staff members are responsible knowing the content of the meetings. They feel this arrangement results in increased professionalism of the staff. Many interview respondents remarked that ownership and commitment are increased since all staff members share equally in the process. Opinions of all staff members are valued. The Site Committee is particularly sensitive to input from others. Staff members surveyed felt that the facilitator process provides a genuine avenue for staff to provide direction for the Site Committee.

During the past few years, Laurel Elementary has successfully developed and implemented several curriculum and procedural changes. These include a writing process; a thinking model; a process that includes teacher, student and parent in conferences and goal setting; projects and thematic units; and multi-age grouping. These innovations have brought about a high degree of staff and community satisfaction. It was felt by staff members that these innovations will remain a part of Laurel Elementary, largely due to the process involved in their inception.

The most strongly agreed upon response from the staff interviews was the conviction that innovation is encouraged at Laurel Elementary. Staff felt respected as professionals, with individual strengths and uniqueness strongly valued. Staff members viewed themselves as progressive and open to change. They appreciated being allowed to experiment with new ideas.

When asked how they deal with differences in staff strengths and ideas, however, some discomfort was apparent. Respondents noted that dealing with differences is not easy. Typical comments were: "We must allow staff to be at the level of expertise that they are at," and "We must remind ourselves that we as adults are developmental and each of us must become comfortable with each innovation."

The staff at Laurel Elementary had some advice to share with schools that might consider developing a similar leadership model. Be aware that change is often a threat to some individuals, commented the interviewees, and expect at least slight resistance initially. They emphasized the importance of developing a model that fits local needs. Since the strength of the model will be in the process that was used to develop it, it's important to be sensitive to fears and concerns of staff members: proceed slowly and allow staff members to adjust to change. It is the Laurel staff's experience that the composition of the leadership of committees needs to change periodically, and that staff may need training in facilitation skills.

And while all this proceeds, they say, keep your focus on the learner and the learning outcomes.

The Laurel Elementary School staff has experienced considerable success in engaging broad-based involvement in school leadership and are able to share their experience in this approach to school improvement activities.

Questions should be directed to the Site Committee at Laurel Elementary School, 1401 Laurel Street, Junction City, Oregon 97448, (503) 998-2386.

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May 1994

SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Snapshot #31

Restructuring at the Secondary Level: Grouping, Instruction, and Assessment

**York High School
Yorktown, Virginia**

Nancey Olson

Research Findings

York High School has been focused on creating a meaningful learning environment for their students for several years. Two recent efforts have included a project for improving math and science assessments, and grouping the freshman class and its faculty into smaller interdisciplinary groups. The research that supports these efforts can be found in the *Effective Schooling Research Practices: A Research Synthesis / 1990 Update* (Northwest Regional Educational Laboratory, April 1990). Some of the relevant classroom and schoolwide practices related to their activities include:

1.3.1 Students are Carefully Oriented to Lessons

1.3.4 Students Routinely Receive Feedback and Reinforcement Regarding Their Learning Progress

- e. Teachers make use of peer evaluation techniques (e.g., in written composition) as a means of providing feedback and guidance to students.

1.5.1 Learning Progress Is Monitored Closely

- a. Teachers regularly monitor student learning, both formally and informally.
- d. Classroom assessments of student performance match learning objectives.
- e. Teachers are knowledgeable about test development techniques and apply these to select or prepare valid, reliable assessment instruments.
- g. Teachers use assessment results not only to evaluate students but also for instructional diagnosis and to find out if teaching methods are working.
- h. Grading scales and mastery standards are set high to promote excellence.

2.1.2 The Curriculum Is Based on Clear Goals and Objectives

- b. Clear relationships among learning goals, instructional activities, and student assessment are established and written down.

c. Collaborative curriculum planning and decision making are typical.

2.3.3 *Staff Engage in Ongoing Professional Development and Collegial Learning*

a. Resources are made available to support ongoing programs of professional development.

b. Collegiality is the norm; it is expected that staff members will routinely share ideas and work together toward the end of improving the instructional program.

Situation

York High School is located in historic Yorktown, Virginia. Situated near the eastern shore and close to the large military installations in Norfolk, Yorktown is also only a short distance from Washington, DC. The 1100-member student body is ethnically mixed, mostly white and African-American, with the majority of students coming from middle-class families. York is one of three high schools in a countywide system, and the students score on the average at about the 69th percentile on norm-referenced standardized tests.

Since 1988, many awards and grants have been received by York High School in recognition of its continual effort to improve the performance of both its teachers and its students. For example, in 1993, York High School was selected as a visitation site by the Southern Regional Education Board; as the first school in Virginia to be a member of the Coalition of Essential Schools; as one of twenty-five schools in Virginia to be a "High Schools That Work" site; and the only high school in the state of Virginia to be a partner with the Center for Staff Development, which entitled them to receive up to $40,000 in staff development money.

Context

York High School is one of eleven schools, K-12, that have been involved in a project in cooperation with the Virginia Education Association, the Appalachia Educational Laboratory, the National Education Association, and the Virginia Department of Education since 1992. A study group made up of eleven teams, two of which were from York, was formed, and members planned and developed the document *Alternative Assessments in Math and Science: Moving Toward A Moving Target.* This project asked participants to develop alternative assessments, implement classroom strategies, record reflections and reactions, analyze data, and write and edit products related to these activities.

York principal Dr. Barry Beers was recognized as Virginia Outstanding Principal of the Year in 1992. His six years at York have been directed at facilitating the change process "with a competent, hard-working staff which has the ability and desire to improve." The strategic restructuring process began with an external analysis of the literature to see what research and forward-thinking experts are saying about the educational and skill needs of the future. An internal analysis looked at all available data to assess student performance at York. Goals and objectives for improving the school were established, and results of the 1990-1993 efforts were recorded. Plans for 1993-1996 are also clearly defined.

In addition to the math and assessment project, York High School developed a strategic plan for restructuring, which has, among many other things, called for regrouping the ninth and tenth grades into smaller clusters of students with an interdisciplinary team of teachers assigned to each group. This staff also looks for innovative ways to integrate the curriculum and to design more meaningful learning activities for students. Lower-track classes in math, English, and science have been virtually eliminated, and higher expectations have been established for student achievement.

There is a growing awareness in the nation's high schools and school districts that the goals of schooling are changing. Employers are asking for employees who can think critically and work collaboratively to solve problems. If schools and their communities believe that students need to become self-directed learners, complex thinkers, community contributors, collaborative workers, and quality producers, then new ways of teaching and assessing those abilities must be developed. York High School staff are exploring ways to do just that. The intention of the school's work in math and science is to create assessments that call for students to use skills in real applications, and teachers to expand the scope of their instructional and assessment strategies, as well as motivating students to reach high levels of achievement.

According to the Executive Summary portion of the report, *Alternative Assessments in Math and Science: Moving Toward a Moving Target,* "Alternative assessment may offer a solution to the dilemma of monitoring and facilitating learning in a realistic and meaningful manner." The study group members, after six months of developing and implementing alternative assessments in their classrooms, stated that implementation strategies should include:

- Planning assessments as instruction
- Having a partner with whom to share ideas and reflections
- Developing generic rubrics to avoid "reinventing the wheel"
- Expecting to learn by trial and error
- Trying student peer assessment
- Using cooperative grouping for completing assessment tasks.

Although no student data were available on any of the assessment tasks except as individual scores given to students, the findings from the study in which the York High School teachers participated included reflections on the following topics:

- **Student Achievement**. More than three-fourths of the study group participants reported that student grades improved. It was commonly observed that group interactions, cooperation on group tasks, oral and written communication performance, organizational skills, and student accountability increased.
- **Student Attitude**. All of the study group participants reported improvement in student attitudes toward school work. Student involvement in classroom learning activities also increased.
- **Instructional Practice**. Instruction became more integrated in nature and moved from teacher driven to student centered. For teachers, facilitating learning became more important than dispensing information.
- **Teacher Effectiveness**. Students and their parents appreciated the variety of assessment tasks devised and used by teachers that played to student strengths and increased learning.

Practice: Math and Science Instruction and Assessment

Two pairs of teachers—math teachers Mary Deal and Linda Hite, and science teachers Vicky Reid and Maxine Bayly—were chosen for the study group team who were to be part of the Alternative Assessments in Math and Science training program. The pairs chosen from each of the schools had to meet certain requirements including (1) the desire to write, (2) some knowledge about alternative forms of assessment or desire to learn about them, (3) a colleague in the same school who would like to work collaboratively on the project, and (4) support of the school administration for released time, opportunities to share with colleagues, and plan with partners as needed to participate in the two-year project. Their training in alternative assessment began in January 1992. Besides the development and implementation of alternative assessment, they were to record their reflections on this process in journals or weekly summary sheets in subsequent meetings.

Deal and Hite developed a series of math tasks, each of which included an objective, an appropriate grade level or course, materials needed, a description of the activity, a scoring rubric and a method of evaluation. Many of the activities are designed for the students to do outside of the classroom and often require that the students be prepared to present their project to the class. Deal and Hite write that, "In problem solving settings outside of the classroom, an individual needs skills to decide what tools to use, what information is pertinent, how the information should be organized, what parameters restrict the solution, which ideas should be explored and which should be discarded. At the end of this processing of information, the students must learn how to communicate the results to others. By using alternative modes of assessment, one can help students develop these skills."

The tasks include such things as:

- Creating an Alphabet Book, where students demonstrate knowledge of a range of algebraic terms through definitions and illustrations
- Doing a geometry project where students cite and discuss examples of parallelism in the real world
- Writing inequality problems for disjunction, conjunction, and absolute values which are solved by other students and the teacher
- Creating posters which are manifestations of a picture using an appropriate scale factor
- Designing, drawing, or producing an example of a solid formed by revolving an area about a line or an axis.

Each activity has a set of criteria and scoring guidelines. In general, criteria call for accuracy, clarity of image or presentation, originality or creativity, neatness, and understanding of the concept.

While visiting Vicky Reid's tenth grade biology classroom, one could see evidence of a hands-on approach to understanding the DNA molecule. A paper chain made by the students to represent the double-helix construction of the chromosome hung across the blackboard in the front of the classroom. This was referred to as students reviewed for a paper and pencil assessment of their understanding of the complex composition of deoxyribonucleic acid. However, before the review began, students presented to the class what they had created as a metaphor for DNA. Illustrations of common objects which represent complex systems were used to describe how they were similar to the functioning of the DNA molecule.

Perhaps the most interesting aspect of this learning experience was that it was part of a more comprehensive project planned by a tenth grade interdisciplinary group called Team 2000. The theme, "Who Am I," was connecting Mrs. Reid's Biology classroom to Mrs. Brock's English classroom where the same students were putting together folders with essays and pictures telling about their families. These presentations focused on the past, with a focus on the students' grandparents, and on the present, illustrating their current immediate and extended families. They also wrote an essay about their life today and how they saw themselves in the future in the year 2026.

In addition, Mrs. Reid will do a unit on genetics, and their World Studies teacher, Mrs. Lee, will have them study and explore geographically the backgrounds of their families, and thus their own origins. In Mrs. Macklin's math class they will study tesselations, another example of the mosaic that makes up the individual and groups of individuals.

The team plans an exhibition of its work for parents, faculty, and school board members, which will include the unveiling of a quilt made by the students. All in all, the program represents an intriguing way to integrate various content into a unifying theme to better understand the self as both a physical and social being, and to learn some English, history, math and science while doing so.

For science projects, many of the classes also use a generic rubric that divides student performance into four levels:

Distinguished

- The student completes all important components of the task and communicates ideas clearly.
- The student demonstrates in-depth understanding of the relevant concepts and /or process.
- Where appropriate, the student offers insightful interpretations or extensions (generalizations, applications and analogies).

Proficient

- The student completes most important components of the task and communicates clearly.
- The student demonstrates understanding of major concepts even though she/he

overlooks or misunderstands some less important ideas or details.

Apprentice

- The student completes some important components of the task and communicates those clearly.
- The student demonstrates that there are gaps in his/her conceptual understanding.

Novice

- The student shows minimal understanding.
- The student is unable to generate strategy; answers may display only recall effect, lack clear communication and/or be totally incorrect or irrelevant.

This rubric was used in an earth science class where students were allowed to choose from eight options to show their understanding of the deformation of the earth's crust. They could devise a laboratory activity, use modeling clay to represent rock formations subjected to various forces, take photographs of actual rock formations in the area where they live, do a research project about different types of mountains, write a report about the development of the Rocky Mountains; create a picture display from magazines of various land formations, illustrate the formation and rock structure of a folded mountain using clay, or use different colored clay to build a model of a series of synclines and anticlines.

Each student could also choose his or her own project, with approval of the teacher, that would lead to a demonstration and/or report. Students could work alone or with a partner and were to choose a project that was of interest, was feasible without much expense, and could be completed within the time limit.

Practice: A Group Experience

The ninth grade and some of the tenth grade staff is organized into interdisciplinary teams that usually include an English, math, social studies and science teacher. In addition, each team has a teacher assistant—in one case, a college graduate interested in becoming a teacher. The assistant provides team members the support they need in order to have time to plan and teach effectively together. A visit with the S.A.G.E. (Science, Algebra, Geography, and English) team, which was the first team to organize on an experimental basis in 1990, revealed much enthusiasm for creating a family atmosphere for a group of approximately 80 ninth grade students. These team members truly believe in the importance of creating a sense of belonging for their students. They find that even after students move to the higher grades, they still know where the staff team meets and often stop by with concerns or just to say "hi."

The individual attention that is afforded by concentrating on a small group of students, together with the constant communication that occurs among the team members, the students, and their parents, make for a place where students feel someone knows and cares about them.

In addition, the academic program is more coherent and allows for the team to plan activities that engage the whole group. Again, the strategic plan calls for the use of thematic units by all teams. For the S.A.G.E. team, this focus is a special part of their program called Human Connections, which addresses the types of goals thought to be essential for life outside of school. The units address themes in the areas of (1) Life Cycle, (2) Languages, (3) Aesthetics, (4) Time and Space, (5) Groups and Institutions, (6) Producing and Consuming, and (7) Ecology. This year's first assignment had students doing research papers on topics such as changing medical needs from prenatal to old age for the Life Cycle area, and how people have dealt with the natural disaster of flooding throughout the ages. Following this challenging effort for beginning freshman, the staff in this team decided to do something more "active."

A visit to Mrs. Williams's class saw students working in groups of four on a project that would result in each group performing a skit the members had written addressing a situation in one of the seven areas. The morning began with a skit presented to the students, which included the principal, Dr. Beers, as a participant. The group of over 100 students was then told of the assignment to create skits. Students were provided with the criteria on which their storyboards, scripts, and presentations were to be judged. They then had the rest of the morning to work on topics, such as a good and a bad example of a job interview, highlighting proper and improper use of language for the Language area, and illustrating musical taste differences between older and younger generations for the Aesthetics area.

Each skit was to receive a group grade and individual grades, and be rated by other students and the teacher. The students were to be rated on the following criteria:

1. The team addresses the assigned topic effectively.
2. The team's presentation is informative.
3. All team members are involved in preparation of the skit (evaluated by the teacher).
4. All team members are involved in the presentation.
5. A storyboard is completed and turned in.
6. A script is completed and turned in.
7. The presentation is performed "off script."
8. Contingency plans are made for performing the skit in the event of absence of a team member.

There is also a generic Oral Presentation Assessment Form that is used by the team for all oral presentations. It includes twenty elements, but only those appropriate for the task undertaken are used. For example, the use of graphs and/or charts would not be applicable when doing the skits. A generic set of criteria used for all written products has also been developed and is used by all staff members on the S.A.G.E. team.

A Vision

The staff at York High School is currently working to clarify their intended outcomes for students. The Goals/Standards Committee has presented to the staff for their discussion and approval a set of standards which they feel will continue to foster better learning for all students. They have identified ten broad outcomes, and the performance indicators that they believe will prepare their students for a better future. This and their continued effort to implement and monitor the *Strategic Plan for Restructuring*, can be expected to bring them continued success.

More information about the math and science assessment project and the published report *Alternative Assessments in Math and Science: Moving Toward a Moving Target* is available from Jane Hange, Appalachia Educational Laboratory, PO Box 1348, Charleston, West Virginia 25425, 800/624-9120. You may also contact Vicky Reid at York High School for information about the project.

Dr. Barry Beers is available to provide information about the restructuring efforts at York High School, 9300 George Washington Highway, Yorktown, Virginia 23692, (804) 898-0354.

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May 1994

SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Snapshot #32

Rejuvenating a Multiethnic Urban School

Shidler Elementary School
Oklahoma City, Oklahoma

Angela Wilson
and
Kathleen Cotton

Research Findings

The staff of Shidler Elementary School in Oklahoma City, Oklahoma make extensive use of many practices researchers have identified as conducive to improvements in educating students, especially within urban schools serving multiethnic student populations.

The following practices, identified in *Effective Schooling Practices: A Research Synthesis / 1990 Update* (Northwest Regional Educational Laboratory, April 1990), have guided much of the restructuring effort at Shidler:

1.2.1 *Instructional Groups Formed in the Classroom Fit Students' Academic and Affective Needs*

a. When introducing new concepts and skills, whole-group instruction, actively led by the teacher, is preferable.

f. Teachers make use of heterogeneous cooperative learning groups, structuring these so that there are both group rewards and individual accountability.

1.2.4 *Standards for Classroom Behavior are Explicit and are Consistently and Equitably Applied*

a. Teachers let students know that there are high standards for behavior in the classroom.

d. Consistent, equitable discipline is applied for all students. Procedures are carried out quickly and are clearly linked to students' inappropriate behavior.

e. Teachers reinforce positive, prosocial behaviors, especially with students who have a history of behavior problems.

1.3.1 *Students are Carefully Oriented to Lessons*

1.3.3 *Effective Questioning Techniques are Used to Build Basic and Higher-Level Skills*

c. To check students' understanding and stimulate their thinking, teachers ask a combination of lower cognitive (fact and recall) and higher cognitive (open-ended and interpretive) questions during classroom recitations.

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School, Community and Professional
Development Program

1.3.4 *Students Routinely Receive Feedback and Reinforcement Regarding Their Learning Progress*

d. Praise and other verbal reinforcements are provided for correct answers and for progress in relation to past performance; however, teachers use praise sparingly and avoid the use of unmerited or random praise.

1.4.3 *Personal Interactions Between Teachers and Students Are Positive*

2.1.1 *Everyone Emphasizes the Importance of Learning*

b. The principal and other administrators continually express expectations for improvement of the instructional program.

2.3.1 *Strong Leadership Guides the Instructional Program*

In her paper, *Educating Urban Minority Youth: Research on Effective Practices* (Topical Synthesis #4, NWREL 1991), Kathleen Cotton identifies additional practices with "particular relevance to members of minority racial and ethnic groups." Those influencing Shidler's program include "multicultural programming integrated into the core curriculum to promote cross-cultural understanding and respect," and "coordination of community resources to meet personal or family needs of students."

Situation

Shidler Elementary School (pronounced Shydler) is a small urban school in the Oklahoma City Public School District, serving 250 students in kindergarten through fifth grade, plus 20 students who attend a morning prekindergarten program. Shidler is located in the economically depressed residential and industrial northeastern section of the city. In fact, Shidler's neighborhood is the economically poorest of the school district's 63 elementary and 17 secondary schools. Much of the school's population resides in a nearby public housing complex, and nearly all of Shidler's students receive meals under the free breakfast and lunch program.

The school's neighborhood has always been multiethnic, but the composition has changed over the years. A decade ago, African-American youth comprised about 70 percent of the student body, Hispanics 15 percent, whites 10 percent, and Native Americans 5 percent. By contrast, the current population is 50 percent Hispanic, 22 percent white, 21 percent African-American, and 7 percent Native American. Forty percent of the student body is limited English proficient (LEP). In addition, only 10 percent of the students whose sole language is Spanish are literate in that language.

One of Shidler's assets is that, because it is smaller than the average Oklahoma City elementary school, the teacher-student ratio is higher than the city's mandated ratio of one teacher and one teacher's assistant for every 20 students.

Context

At the time of his appointment as Shidler's principal in 1985, Dr. Eugene King says that the school had a bad reputation among the school district's administrators and teachers. Faculty considered it a punishment to be assigned to Shidler, and staff morale was extremely low. "No one wanted to be principal here," King says, recalling that the school was dark and dirty and lacked a clear academic focus. Too often in those days, students received inequitable treatment based on the racial and cultural prejudices of teachers and administrators. Student and staff absenteeism was rampant. Many parents felt alienated by the negative attitude manifested by the school staff, and they seldom participated in school activities.

"There were *no* computers here," King goes on, "and although half of Shidler's students spoke Spanish as their first and often only language, there were few Spanish-language resources." King recalls that former district superintendent, Dr. Arthur Steller, was prepared to close the school down because of its students' poor academic performance and low attendance rates. For years Shidler's test results were in the lowest quartile among the district's schools.

Many administrators would have abandoned hope of bringing about improvements in such an environment. But King, with his background in educational administration and in working with emotionally and developmentally disabled students, had seen what could happen with students when teachers believed in them. He decided to take the situation at Shidler as a challenge.

Among King's early efforts at Shidler was the work undertaken to upgrade the school's building and grounds, reasoning that students are not likely to respect or take pride in a dirty, run-down environment. He brightened the building's interior with more lights and a new paint job, and he began seeing to it that the grounds were maintained.

At the same time, King worked to earn the trust of the parents of Shidler's students. He recalls spending several months going to local homes and businesses, introducing himself, and outlining his plans to improve student learning and behavior at Shidler. In his second year, he began holding three or four book sales annually as a way of getting parents to come to the school and also to get more reading material into students' homes. His goal was to develop a partnership with the community. "We needed to educate the kids, and that called for school staff and parents working together as partners."

Steady, gradual improvements in the instructional program and in student learning and behavior followed. Then, in 1989, unexpected events ushered in a period of rapid growth in Shidler's improvement efforts. In that year, businessman Charles Hollar of Ponca City, Oklahoma established a foundation for teachers who were interested in utilizing the techniques taught by Marva Collins at her West Side Elementary School in Chicago. Knowing of and admiring Collins's methods, King engaged his staff in applying for one of the foundation grants.

The Marva Collins style of teaching is grounded in the development of reading skills through phonics, memorization and recitations, and acknowledgment and praise for work well done. Her successful work with poor, urban children is based on the assumption that all children can learn, and that a teacher has failed a student if the student is failing to learn. Says King, "I was serious about changing teacher attitudes. My teachers were putting limitations on kids. When a teaching method wasn't working, the teachers were making excuses. My desire was to take the excuses away. As Marva Collins says, 'if the student didn't learn it, then I didn't teach it.'"

After applications were submitted, 25 schools in Oklahoma were chosen, with Shidler being one of eight Oklahoma City schools selected. Administrators and teachers from the Oklahoma schools went to Collins' West Side Academy in Chicago for two days. In addition, each school was able to send two teachers to West Side Academy for an intensive five-day stay, with their expenses covered by a combination of grant and state resources.

Collins's approach to teaching reading had a powerful influence on participants. "We found [Collins's method] very impressive. Once you begin to understand the elements of language, vocabulary and pronunciation come easily," says King. To further enhance its language arts program, in 1992 Shidler purchased a phonics program called Open Court for the school with Chapter 1 funds. "At every grade level we teach language arts as a block," King remarks. "Ours is an integrated curriculum in which our teachers teach reading all day long."

Computers have also played a major role in the turnaround at Shidler. The school's first classroom computer was donated by an Oklahoma City attorney. Since then, the school has received other donated computers, all of which are networked with one another and contain various mathematics, language arts and computer literacy lessons, along with several popular learning games. Shidler will also benefit from a recently passed bond measure; some of the revenue will go toward the purchase of computer equipment and science equipment in the Oklahoma City School District. King plans to have at least one computer for every three students when the school receives its share of the bond funds.

King routinely finds ways to showcase the teachers and students who exemplify Shidler's improvements and the direction in which he wants the entire school to go. For example, since recitations are a major part of the language arts program, King contacted Kiwanis Clubs, the local Chamber of Commerce, and other organizations, and told them that some of his students were available to deliver recitations of famous speeches, historical documents, and the like. "When teachers and students became aware that one class was being invited to give recitations and getting steak, baked potatoes, and acclaim," King says, "they wanted to get in on it, too." Now, many Shidler students have had the opportunity to give recitations at local civic clubs, government agencies, and other sites and to build self-esteem from sharing their work and having it acknowledged.

Practice: Learning Activities in Shidler's Classrooms

At the time of the observer's visit to Shidler, the school's hallways were festooned with brightly painted murals chronicling Greek myths and featuring gods and goddesses—the result of recent learning activities in several of Shidler's classes. In addition, since the Thanksgiving holiday was near, Thanksgiving-theme drawings and paintings were also on display. There were no graffiti in evidence either inside or outside of the school.

KINDERGARTEN

Erma Coburn's kindergarten classroom was brightly decorated with maps, large phonetics flash cards, and proverbs written in clear handwriting. The enthusiasm of Ms. Coburn's students was palpable as soon as the classroom door was opened. Three computers were in one corner of the room, where students took turns working on them.

Ms. Coburn had her students recite a phonics drill that was keyed to the Open Court alphabet and sound cards atop the blackboard. The entire class recited the drill, and Coburn took time out to ask different students questions about the sounds and characters displayed, as well as about the content of the lesson—the solar system, mapmakers, and other related topics.

Exhibiting highly developed language skills, the students also worked through some vocabulary exercises, focusing on key words in the proverbs that were displayed on the wall. Nearly every student responded to questions with complete sentences. Later, Coburn had the students count to 100 in Spanish and English, which they did with great enthusiasm. Several of the word drills were also conducted in both English and Spanish.

Each class at Shidler has at least one assistant, many of whom are fluent in both Spanish and English. However, both Coburn and bilingual assistant Dolores Diaz acknowledged that the students could greatly benefit from even more bilingual education. "We need more bilingual teachers and assistants," Diaz says. "Some children are still not getting a proper education, because they are not receiving enough instruction in their primary language." During a debriefing session held later in the day, Eugene King indicated that acquiring more bilingual staff members is one of his goals.

GRADE 4

As soon as the observer entered the classroom of fourth grade teacher, John Roberts, he introduced her to his class and had his students sound out her name phonetically.

Working at their desks individually, in groups, or with the assistance of Roberts and teaching assistant Gilbert Oliver, students pursued bilingual activities. Fluency in English and Spanish is emphasized in Roberts's classroom, with students learning the pledge of allegiance and many songs in both languages, as well as learning to translate names from one language to the other.

At lunchtime, the students in Roberts's class go to the lunchroom, pick up their lunches, and then return to eat in the classroom along with their teacher and assistant. Roberts believes that the children benefit from this consistent adult presence through the school day.

Roberts's students are encouraged to bring their interpersonal conflicts to him, and when they do, he discusses the options available to them, without "handing them a solution." For example, two students were in conflict about the use of one of the computers. One went to Roberts and complained, whereupon he talked with both students to resolve the problem. When one of the two students was in another conflict regarding a computer later in the day, she made use of the same process for resolving the problem that she had learned from Roberts during the initial conflict.

Students also learn personal hygiene practices in Roberts's class. They all wash their hands in the classroom before lunch, and when lunch is over, they brush their teeth with toothbrushes Roberts has given them.

Results

Along with the many anecdotal accounts of the school's improvements are the assessment data indicating improvements in the reading skills of Shidler's students: their performance now compares favorably with that of other schools in the district. Many of the students are reading one or two years ahead of their actual grade level, and King speaks with special pride of one class of Shidler fifth graders, who are reading high school-level materials and exhibiting high comprehension scores.

Student performance data reveal improvements in language arts and mathematics as well as reading. The following chart depicts the increases in student achievement on standardized tests in recent years:

ITBS Percentile Scores

	Reading	Math	Language
1992-93	50	65	70
1989-90	37	44	56

In addition, from the 1986-87 school year to the 1992-93 school year, school data reveal the following changes:

- An increase in Shidler's average daily attendance from 88 percent to 95.2 percent
- A 12 percent reduction in costs associated with vandalism (even though the cost of materials and labor increased significantly during this period)
- A 35 percent increase in parent participation in parent-teacher conferences
- A 61 percent increase in parent participation in school open-house activities.

King says it is difficult to pinpoint the most important causative factor for the academic progress and behavioral improvements of Shidler's students. He says that activities aimed at enhancing student self-esteem, the school's reading program, and the motivation and skill-building provided by the computers "are all key elements that interrelate to help us grow toward our goals."

In a debriefing session, King and fourth grade teacher John Roberts acknowledged that there is still a contingent of teachers that has not taken ownership of the Collins approach to developing reading skills and other methods adopted by Shidler. King says he uses attraction as a way of bringing teachers into the fold, rather than coercing them. "I walk them very slowly through the program, with changes being optional at first, and then eventually making them mandatory." This approach is apparently successful, since King estimates that only about ten percent of Shidler's teachers have yet to buy into the program.

How does King feel about improvements he has spearheaded at Shidler? "Good," he says, "but not complacent. We are never in the land of the 'done.' There is always more to do."

Superintendent Betty Mason states that the staff and students at Shidler Elementary School represent a special educational triumph. Dr. Mason was assistant superintendent when Eugene King was transfered to Shidler and was the district's coordinator of the Collins Project. As such, she has been very close to the changes that have taken place at Shidler. In Dr. Mason's words:

> Principal King and his staff defy all false perceptions about poor children being unable to learn. Teachers are teaching there, and children are learning. Shidler Elementary School is a model school for urban students. The administrative leadership of Eugene King has made the difference.

For more information about the programs at Shidler Elementary School, please contact Dr. Eugene King, Principal, 1415 South Byers, Oklahoma City, Oklahoma 73129, (405) 632-1070.

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